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**UNIT
MOVEMENT
OPERATIONS**

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**HEADQUARTERS,
DEPARTMENT OF THE ARMY**

Field Manual
No. 4-01.011

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 31 October 2002

UNIT MOVEMENT OPERATIONS

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PREFACE

This manual is about the movement of units. Movement responsibilities, movement planning and coordination, movement preparation, and movement execution.

Unit movement occurs in a variety of situations. Unit moves can be routine, as part of an exercise, reaction to a crisis or incident to the projection of force.

Army Goal: "With the right technological solutions...allow us to put a combat capable brigade anywhere in the world in 96 hours after liftoff, a division on the ground in 120 hours, and five divisions in 30 days."

— General Shinseki, CSA

The Chief of Staff of the Army has mandated that the Army be able to move a combat capable brigade anywhere in the world within 96 hours. Significant effort is being made to enhance the national ability to more rapidly project force: To more quickly put a viable combat capability on the ground anywhere in the world. This goal is being developed and met in terms of strategic deployment. However, each deployment involves a series or collection of unit movement operations.

The organizational level focus of this manual is the company, battalion, and brigade. This manual is designed to assist the unit commander and his non-commissioned officers in conducting successful unit movement operations. It does not provide step-by-step procedures, and it does not go into the details of the entire deployment process, which is the scope of other manuals. It is intended to define what is involved for the movement of units, and some detailed actions that must occur for the move to be successful, and where the responsibility for them are. The entire deployment process is covered in FM 3-35 (FM 100-17) *Army Deployment and Redeployment Operations*. Transportation Coordinator's Automated Information for Movement System II business practices and terms are introduced in this manual, as well as other supporting and related automated information systems. Lastly, it provides a discussion of some of the tools available that are involved in the movement of units. An awareness of the scope of the task, how to plan for it, and how to coordinate it are the essentials of this manual.

This manual is the result of the developments and enhancements of the Army's deployment capability, and reflects changes in Army transportation doctrine.

The proponent of this publication is the United States Army Combined Arms Support Command (CASCOM). Send comments and recommendations on Department of the Army (DA) Form 2028 to Commander, US Army Combined Arms Support Command and Fort Lee, ATTN: ATCL-T, Fort Lee, Virginia, 23801.

Unless this publication states otherwise, masculine nouns and pronouns do not refer exclusively to men.

Chapter 1

Unit Movement Responsibilities

A unit move is the relocation of a force and its materiel to a desired area of operations. To accomplish a unit move, movement plans are developed and unit movement operations are conducted.

UNIT MOVEMENT OPERATIONS OVERVIEW

1-1. A unit movement operation is the movement of unit equipment, personnel, and accompanying supplies from one location to another. Unit movement operations are conducted during training exercises, mobilization, and deployment. Unit movement operations are planned, coordinated, and executed by four principal modes: rail, motor, air, and sea. The mode of movement determines tactics, techniques and procedures for preparation, planning, coordination and execution of unit movements. This FM discusses unit movement operations by all modes.

1-2. Every movement is unique. These operations seldom begin with a clear idea of the entire package or purpose. Often, they develop by bits and pieces, with a few false starts and subsequent large adjustments. They follow a general sequence, although the stages often overlap in space and time, and can happen simultaneously. The process is flexible and can be abbreviated and adjusted as required. However, the fundamental processes of moving units do not change to support a deployment. They become more complex because of the need to coordinate on a broad scale with other Services and organizations (outside the US Army).

NOTE: Redeployment is a separate phase of force deployment. However, it is a unit move and the principles of unit movement operations discussed in this FM prevail.

UNIT MOVEMENT ROLES AND RESPONSIBILITIES

1-3. The remainder of this chapter outlines the duties and responsibilities of key personnel during the coordination and planning of unit movement operations.

1-4. Unit movement operations involve the command's staff expertise in personnel, intelligence, operations, and logistics. At the battalion and brigade level, staff proponentcy for movement operations resides with the S3 and is executed in coordination with the S4. Higher headquarters operations and intelligence staff conduct mission analysis and receive the commander's intent for accomplishing the mission. The next step is to produce several courses of action to accomplish the mission. These courses of action may involve several task organizations and usually address limitations in transportation capability to support the mission. A course of action and task organization are selected which starts the unit movement planning sequence. Staff planners need to translate operational mission requirements into detailed and realistic unit movement plans. This translation must occur in a short time frame and must be able to capture continuous changes based on the current tactical situation. This process involves task organizing, echeloning, tailoring and movement.

1-5. Brigade level, battalion level, and separate company level organizations select soldiers to be trained in unit movement operations. These tasks are performed as additional duties in support of the unit mission. These soldiers are then appointed on additional duty orders to be responsible for these functions for their units. Unit movement training includes hazardous material certification, aircraft load planning, and unit loading teams. Unit loading teams that execute the load plans by physically loading, blocking, bracing, and tying down the load on the truck, aircraft, or railcar. Additional training is required on automated information systems such as Automated Air Load Planning System (AALPS) and Transportation Coordinators' Automated Information for Movement Planning System (TC AIMS II). (See Commander's Unit Movement Officer checklist at Appendix K.) Additionally, the staffs in these organizations play an integral part in the unit movement process.

1-6. Commanders responsibilities include:

- Ensuring adequate movement plans are prepared.
- Ensuring proper execution of movements.
- Appointing a unit movement officer (UMO) and providing proper training.
- Ensuring that load teams are appointed and trained.
- Ensuring that hazardous materials (HAZMAT) personnel are properly certified, trained, and equipped.
- Ensuring that personnel responsible for movements receive the required training.
- Ensuring that the proper equipment and supplies are available for movements.
- Ensuring that the unit follows required regulatory and higher command guidance for unit movements.
- Maintaining the morale of the unit.
- Ensuring that unit responsibilities outlined in paragraph 1-11 are performed.

1-7. Executive Officers:

- Assists the unit commander in meeting the commander's movement responsibilities.
- Supervises the unit staff in all matters dealing with unit movements.

1-8. Brigade and battalion S1 and personnel administrative specialists have responsibility for maintaining the personnel and medical readiness information on all soldiers assigned to the unit. The battalion S1 coordinates the soldier readiness processing program. Unit commanders must have a formal review process in place to ensure soldiers meet deployment readiness requirements IAW AR 600-8-101. Soldier readiness is a continuous process that involves unit commanders and staff and the installation staff agencies. Unit commanders are responsible for ensuring their soldiers are prepared for deployment. To assist the unit commander in performing this task, the battalion S-1 and admin specialist must provide current information concerning an individual soldier's completion of the following requirements prior to deployment.

- Personnel - Verify re-enlistment status, family care plan, SGLI-8286, DD Form 93, ID Tags, ID cards, etc.
- Medical - Verify current HIV test, complete medical records, required immunizations, eyeglasses and insert requirements, medical history screening reviewed, existing profiles.
- Dental - Verify current panoramic x-ray on file, existence of pending or incomplete treatment requirements.

- Provost marshal - Complete vehicle registration requirements, registration and storage of privately owned weapons.
- Finance - Verify establishment of SUREPAY, pay entitlements, required pay allotments.
- Security - Verify security clearance requirements are met/current.
- Legal - Verify Geneva Convention briefing, will and powers of attorney requirements, any pending UCMJ or civil charges.
- Training - Verify all required mission/terrorist briefs have been provided, current weapons qualification.
- Additional personnel information as required

1-9. Brigade and battalion S3 and training officer and NCO have the responsibility for maintaining the training readiness information on the unit and the individual soldiers assigned to the unit. Unit movement training is also required to support unit movement operations. Unit movement missions can occur rapidly, leaving the moving unit with little or no time to correct training deficiencies. Unit commanders are responsible for unit movement training of soldiers and units to support movement operations. The battalion S3 and training officer and NCO supports the commanders by scheduling required training, maintaining individual soldier training records, and providing soldier's current training status concerning:

- Army physical fitness test (APFT)
- Code of conduct training
- Weapons qualification
- Subversion and espionage directed against the Department of the Army (SAEDA) training
- Driver's training course for destination country
- Specialized training as required for destination country
- First aid training
- Unit movement officer and unit movement NCO Training
- Air deployment planning
- Transportation Coordinators - Automated Information for Movement II (TC AIMS II) Training
- HAZMAT certification training
- Unit loading team training
- Mobilization briefing (RC units)
- Legal briefing (RC units)
- Any additional training requirements needed to support the mission

1-10. Brigade and battalion S4 and supply sergeant has the responsibility for maintaining the equipment and supply information on the unit. The S4 and supply sergeant maintains updated equipment on hand, unit basic load and equipment status information. The supply sergeant maintains updated supply information such as supplies and equipment assigned to individual soldiers in the unit. The battalion S4 is responsible for coordinating support requirements for unit movement operations. The S4 uses TC AIMS II to plan, manage, and execute the movement.

RESPONSIBILITIES OF THE MOVING UNIT

1-11. The unit coordinates movement of personnel and equipment using internal assets and coordinates movement of personnel and equipment that it cannot move with higher headquarters, the brigade movement coordinator (BMC), or the unit movement coordinator (UMC). The unit:

- Prepares support requests and sends them to the BMC or UMC.
- Requests convoy clearances and special hauling permits from the BMC, UMC, or state area command (STARC).
- Requests blocking, bracing, packing, crating, and tie-down (BBPCT) materials from the UMC or other designated source.
- Coordinates obtaining pallets and containers with BMC or UMC.
- Establishes liaison with the arrival/departure airfield control group at the aerial ports of embarkation and debarkation.
- Coordinates with the property book officer to reconcile any MTO&E and CTA movement critical shortages have valid requisitions.
- Coordinates other company-level UMOs and brigade UMCs to identify any equipment shortages that must be cross-leveled upon movement notification.
- Coordinates with the installation food advisor (IFA) or subsistence manager to learn procedures and get forms required to draw operational rations. (These rations are exclusive of rations enroute to the theater of operations).
- Coordinates with the Classes II and IV (individual equipment and construction materials) Officer to verify availability of items required for the move. These items include a basic load of organizational clothing and individual equipment (OCIE).
- Coordinates with the Class III (petroleum, oil, and lubricants) Officer to verify quantities required of packaged petroleum, oil, and lubricants.
- Coordinates with Class VIII (medical supplies) Officer to ensure availability on station of medical supplies required for the move.
- Coordinates Class V basic load through supply channels.

UNIT MOVEMENT OFFICER

1-12. The unit movement officer (UMO) is appointed at the company and battalion levels. The UMO represents the company or battalion commander in attending to the details of getting the unit ready for movement and maintaining that readiness when it is achieved. The position is an extremely important one. While different commanders may demand more or less of their UMOs, this FM outlines the duties and responsibilities that must be met and accomplished for the unit to perform a successful unit move. Whether the move is a road march from a cantonment area to an exercise area, or from home station to a port of embarkation (POE) (or to another location for unknown reasons), the basic preparation and coordination, outlined in the chapters that follow, are critical to success.

1-13. Commanders appoint in writing an officer or senior NCO (E6 or above), with an alternate (E5 or above), to serve as the UMO at the battalion, company, or detachment level. The UMO is trained in a school or in the unit (on-the-job training) to perform the following duties:

- Supervise preparation and maintenance of unit movement and unit load plans (rail, air, and vehicle load plans). Also to supervise the execution of the plans on order.
- Use TC-AIMS II to prepare and maintain documentation needed for unit movements. This includes maintaining the unit's movement data, from which the organizational equipment list (OEL) is generated, and creating and processing the unit deployment list (UDL). The OEL and UDL include equipment, personnel, and supplies. The company UDLs are passed to the battalion where they are merged into a battalion UDL.
- Train unit load teams.
- Ensure unit personnel authorized to handle and certify hazardous materials are available.
- Ensure packing lists are properly prepared..
- Use TC-AIMS II to prepare convoy clearance requests.
- Ensure convoy vehicles are properly marked.
- Ensure all cargo is properly labeled.
- Assist in preparation of unit passenger and cargo manifests. Inspect manifests for accuracy.
- Coordinate with higher headquarters and supporting units for operational and logistical support of unit movements. This includes coordination with the departure airfield control group (A/DACG) and military traffic management command (MTMC) element as necessary.
- Maintain a UMO continuity folder or movement binder. (See Appendix H.)

1-14. Company UMOs maintain movement binders. Movement binders include items such as appointment orders training certificates, recall rosters, current OEL; and copies of load cards, packing lists, transportation requests, convoy movement requests, special handling permits, and BBPCT requirements. Suggested items to be included in movement binders are in Appendix H.

1-15. Battalion UMOs are appointed to be responsible for battalion movement actions and to coordinate and assist in the development, maintenance, and evaluation of subordinate units' movement plans. Normally located in the S4 office, the battalion UMO performs the following actions:

- Coordinate movement planning guidance that applies to subordinate units.
- Prepare recommendations as appropriate to enhance movement planning and execution.
- Prepare and maintain battalion movement plans that incorporate subordinate units' movement requirements.
- Train subordinate UMOs in duties and responsibilities of movement planning.
- Use TC-AIMS II to consolidate company UDLs and pass the battalion UDL to the brigade.
- Use TC-AIMS II to create military shipping labels (MSL) and automatic identification technology (AIT) tags.
- Use TC-AIMS II to create and submit convoy documentation.
- Create air load plans using AALPS.
- Identify Supercargoes. (See appendix A.)
- Create commercial and military transportation documentation.

1-16. In addition to the above duties, both the battalion and company UMOs must be familiar with:

- Transportability of the units' organic equipment and cargo.
- Identifying, labeling, segregating, documenting, and moving hazardous materials (HAZMAT) peculiar to the unit.
- Hazardous materials certification process.
- Procedures for requesting commercial and military transportation.
- Unit requirements for 463L pallets, containers; BBPCT materials.
- Unit radio frequency (RF) tag and military shipping label (MSL) requirements.

UNIT MOVEMENT COORDINATOR

1-17. The UMC is the command technical movements expert. As such, the UMC provides advice to those in both superior and subordinate positions. When reviewing plans, the UMC ensures that they adequately address all aspects of logistics and are designed to meet the needs of the unit.

1-18. The UMC is usually found in the installation transportation office (ITO) in CONUS, and OCONUS, in the MCT. However, especially in CONUS, the UMC location is the commander's discretion and can be found outside the ITO or its equivalent. (**NOTE:** The term ITO is used generically in this FM to refer to the staff section at installation level responsible for planning and coordinating transportation for unit moves.) The UMC coordinates strategic movements and assists units in developing and executing unit movement plans. The UMC:

- Provides movement guidance to all units moving from the installation.
- Processes convoy clearances and special hauling permits to meet unit requirements.
- Advises the unit on preparing movement documentation.
- Verifies the amount of ships and aircraft (determined by TRANSCOM) required by each unit and assists in designating loading sites and coordinating times to start and complete unit loading.
- Assists units in identifying and obtaining BBPCT materials.
- Coordinates unit materiel handling equipment (MHE) requirements with commercial and military MHE sources.
- Coordinates movement documents for commercial lift of unit personnel to include enroute support.
- Ensures unit equipment is properly marked prior to movement by any mode.
- Supports unit movement at railheads, seaports, and airfields.
- Serves as the primary POC for special assignment airlift mission (SAAM) and exercise airlift. Coordinates airlift requests for active component (AC) and USAR units.
- Coordinate allocations of containers, 463L pallets, and cargo nets.

BRIGADE MOVEMENT COORDINATOR

1-19. The brigade movement coordinator (BMC) coordinates the movement of personnel and equipment beyond the capability of organic unit assets with the installation transportation officer or UMC. The BMC is the liaison between the UMO (at battalion and company) and the ITO in

CONUS locations, the MCT in OCONUS locations; and in both locations, the UMC. BMCs are appointed to coordinate and support Brigade movement activities and to assist in the development, maintenance, and evaluation of subordinate units' movement plans. Normally located in the S4 office, the BMC is responsible to:

- Verify the OEL data with units and submit changes to higher headquarters.
- Use TC-AIMS II to consolidate unit UDLs and create movement programs.
- Use TC-AIMS II to receive and distribute TPFDD after receiving it from Joint Force Requirements Generator (JFRG).
- Provide TC-AIMS II movement programs to the UMC.
- Use TC-AIMS II to submit support requests to the UMC.
- Use TC-AIMS II to plan convoys and create documentation.
- Create commercial and military transportation documentation.
- Oversee the brigade HAZMAT program.

MOBILITY WARRANT OFFICER

1-20. The mobility warrant officer (MWO) program (MOS 882A) is designed to provide the combat commander a soldier with proven expertise who can work through the specific unit movement challenges. The MWO is the commander's key staff officer for movement operations planning, execution, advice, coordinating, and training. The duties of the MWO include:

- Plans and supervises the movement and deployment of Army personnel and equipment.
- Coordinates movement requests with joint, Army, and commercial agencies.
- Translates and submits unit movement requests in the Defense Transportation System.
- Provides technical understanding and guidance on the implementation and use of transportation automated information systems.
- Trains unit personnel on their responsibilities in unit movement processes and on their tasks associated with unit movement information systems.
- Advises and assists commanders and staffs on unit movement operations.

The brigade mobility warrant officer and transportation logistics NCO provide the brigade with deployment training and execution expertise. The mobility officer is a movement technician who manages and controls the flow of Army Transportation during unit movement operations. Mobility officer and transportation logistics NCO plan, organize, and supervise the movement of Army personnel and equipment. They coordinate movement operations issues with joint, Army, and commercial agencies, and provide technical interpretation and guidance on the implementation and use of transportation automation systems. They also coordinate training of unit personnel, and advise and assist commanders and staffs on the elements of unit movement operations.

HAZARDOUS CARGO CERTIFYING OFFICIAL

1-21. Each unit (company or detachment) requires at least one individual trained to certify hazardous cargo. This individual should not be the UMO. Hazardous cargo certifiers must be trained at a DOD approved school on applicable regulations for all modes. Once trained and appointed by the unit commander in writing, these individuals can certify documentation for all commercial and military modes of shipment. The hazardous cargo certifying official is responsible for ensuring shipments are properly prepared, packaged, labeled, and segregated. The certifying official is also responsible for personally inspecting the item being certified and signing the HAZMAT

documentation. Appendix D provides general HAZMAT guidance for commanders and UMOs. (See Appendix D.)

AIR LOAD PLANNERS

1-22. Air load planners are appointed and trained to prepare and update unit aircraft load plans. The UMO uses the AALPS to supervise the development of aircraft load plans and manifests for both equipment and personnel. TC-AIMS II through its air load planner module allows the UMO to develop aircraft loading plans and manifests for both equipment and personnel.

UNIT LOADING TEAMS

1-23. Each unit requires an appropriate number of personnel trained in vehicle preparation, and aircraft and rail loading and unloading techniques formed into loading teams. Composition of each loading team is tailored to the type and quantity of equipment for which it is responsible and for the time available for loading it. Skills required include those needed for:

- Preparing vehicle, air, container, and rail load plans.
- Loading and unloading unit vehicles properly for all modes.
- Loading cargo into aircraft.
- Palletizing cargo on 463L pallets.
- Preparing vehicles for shipment (purging, protecting fragile components, weighing and marking for air and rail movement).
- Exercising proper aircraft and railcar tie-down procedures.

1-24. Tailoring a loading team to its equipment and available time is necessary. The following guidelines are provided for planning purposes:

- For rail movements, a well-trained team of five operators, using prefabricated tie-down devices, can provide efficient loading and lashing of equipment on a flatcar. Units are normally provided 72 hours for loading once the railcars are spotted.
- For air movement, a six-person team can provide efficient loading and tie-down of equipment. Depending on the type of aircraft more than one team may be required.

INTRATHEATER UNIT MOVEMENT

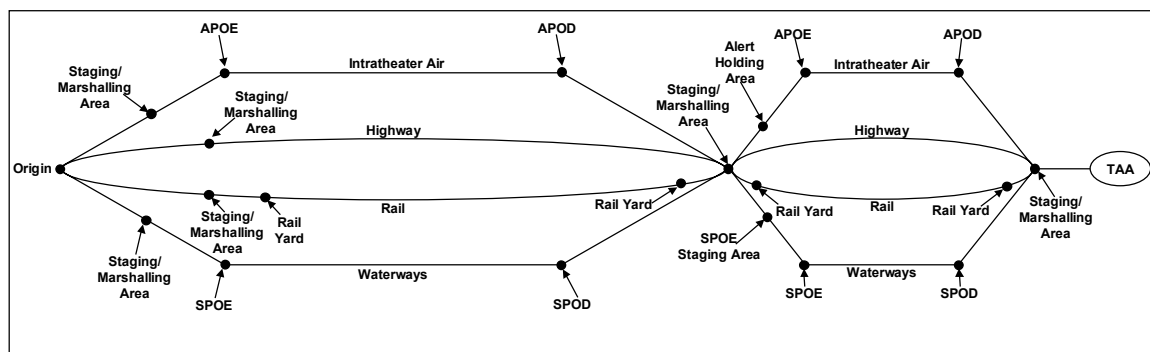


Figure 1-1. Intratheater Unit Movement

1-25. Figure 1-1 depicts present doctrine for intratheater unit movements. Intratheater unit movements normally involve units moving from an origin location to a tactical assembly area (TAA). Based on the transportation assets available and the unit movement plan, any available mode may be used for intratheater movements. How the unit moves from the origin to the TAA depends on the modes selected (e.g., a unit may move by highway directly by from its motor pool to the TAA). Some of the functions depicted in Figure 1-1 may occur at the same geographical location. For instance, if there are rail ramps in or near the motor pool, a unit moving by rail may find the origin and rail marshalling areas collocated.

INTERTHEATER UNIT MOVEMENT

1-26. Figure 1-2 depicts present doctrine for *intertheater* unit movements. Intertheater unit movements normally involve units moving from an origin location to a TAA. The strategic lift portion of intertheater unit movements is by air or sea. As in intratheater moves, all available modes can be used for intertheater moves. And depending on the facilities available and activities to be performed, staging and marshaling area functions may be collocated.

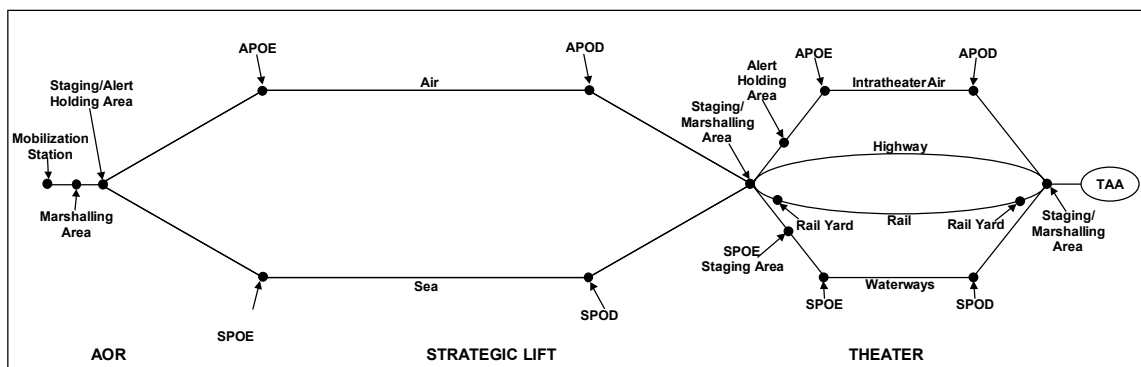


Figure 1-2. Intertheater Unit Movement

1-27. Future intertheater unit movements may occur in the absence of reception, staging, onward movement, and integration (RSOI) capabilities. Future movements of Army forces will not have traditional RSOI in the area of operations. The reception function and preparation for onward movement and integration will take place at an intermodal transfer point (this could be as simple as the unit home station) as depicted in Figure 1-3, or the unit may deploy directly into the theater as depicted in Figure 1-4. Future organizational and materiel designs are going to enhance our ability to arrive in the AO in a much more “ready to fight” configuration than is possible today.

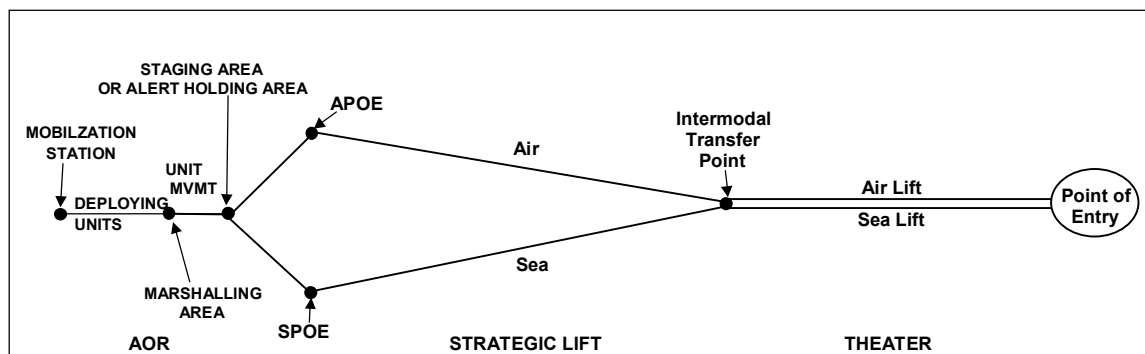


Figure 1-3. Intertheater Unit Movement

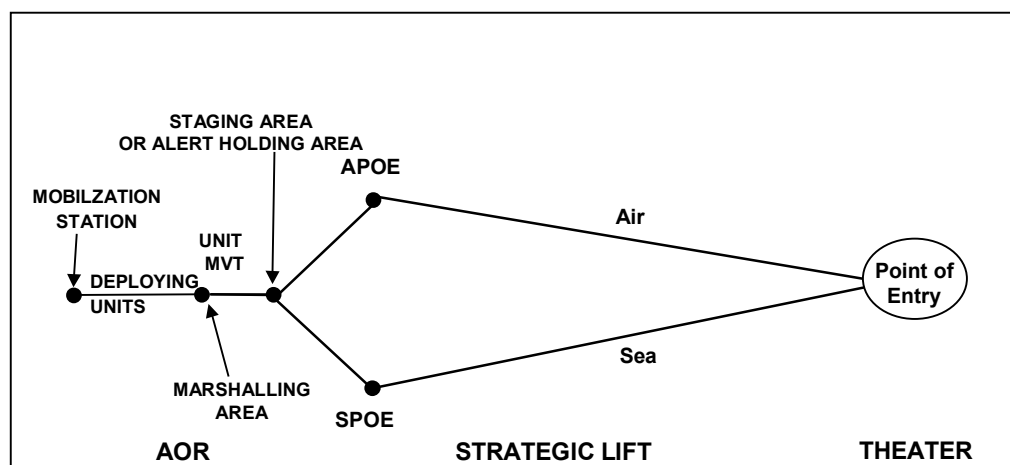


Figure 1-4. Intertheater Unit Movement

Chapter 2

Movement Planning at the Unit Level

A movement is the relocation of a force and materiel to desired areas of operations. To accomplish a movement plans are developed and movement operations are conducted.

Successful movement planning requires knowledge of the unit's movement responsibilities, an understanding of the total movement process, and an intellectual appreciation of the link between movement and employment.

Section 1: MOVEMENT PLANNING

2-1. Army units are required to move globally in support of force projection operations. Units prepare in peacetime to conduct operations supporting contingency plans. Deployments supporting a major theater war and some smaller scale contingencies are planned using the Joint Operations Planning and Execution System (JOPES) deliberate planning process. These plans result in operation plans (OPLAN) with time-phased force deployment data (TPFDD). Deployment planning is based on these OPLANs and related TPFDD, other contingency plans, and exercise plans.

2-2. Units prepare detailed movement standing operating procedures (SOPs) to support unit movement planning. The SOP should define the roles and responsibilities of all unit personnel from Brigade to Company level. The SOP should outline preparations for all modes of movement: air, rail, sea and convoy. Functions addressed in SOPs could include unit property disposition, supply issue, equipment maintenance, vehicle and container loading, security, marshaling procedures, purchasing authorities, unit briefings, risk assessment and other applicable deployment activities. (See example of an SOP at Appendix B.)

2-3. To meet their responsibilities to support operational, exercise, and contingency plans, units develop movement plans. Normally divisions, brigades, and battalions create movement plans and companies use extracts from battalion movement plans in company operation orders. Unit movement plans are tailored to the requirements for mobilization, deployments, and exercises, which have specific goals and missions. The plans are written in operation order format and are usually an annex to an operation order. The unit plans the move using the movement plan and executes the move under an operation order. A unit may have several plans, each one supporting a different contingency or exercise, and tailored to support the plan for it. Each plan makes unique demands on the unit. This is the reason separate plans are prepared and tailored to each requirement. (See Appendix L for guidance on developing a movement plan.)

2-4. The JOPES is the system used to conduct joint planning and operations. Each combatant commander conducts deliberate planning to produce a series of OPLANs that provide detail on how to execute potential operations in their area of responsibility (AOR). Source movement data from TC AIMS II is produced by units to maintain accurate movement data in JOPES. This source data provides the warfighters visibility of personnel, equipment, and supplies available to support his OPLAN. During a crisis, each combatant commander conducts crisis action planning (CAP).

Sometimes existing OPLANs are updated and published as OPORDs to support training exercises, mobilization or deployment operations. In this case deployment orders, or DEPORDs, directing unit movement operations are generated very rapidly and sent down the chain of command for action. DEPORDs can be issued in a very short period of time. Units must be prepared to accommodate changes to meet requirements that arise in response to changing events.

2-5. Unit movement plans are the result of either deliberate planning, which occurs as a matter of course in peacetime, and CAP, which is the reaction to an occurring crisis. Both plans are parallel processes in terms of how they are accomplished. However, CAP occurs in a very short period, is much more demanding in needing actions accomplished in a short timeframe, more tolerant of hasty estimates, and accommodates changes more readily to meet requirements that arise in response to changing events. Either variety of movement plan can involve mobilization of Reserve Component (RC) units and can involve movement of assigned personnel, supplies, and equipment from home station and equipment sites to mobilization sites. A comparison of both processes is shown in Figure 2-2, JOPES Movement Planning Processes. See Appendix L for more detailed guidance.

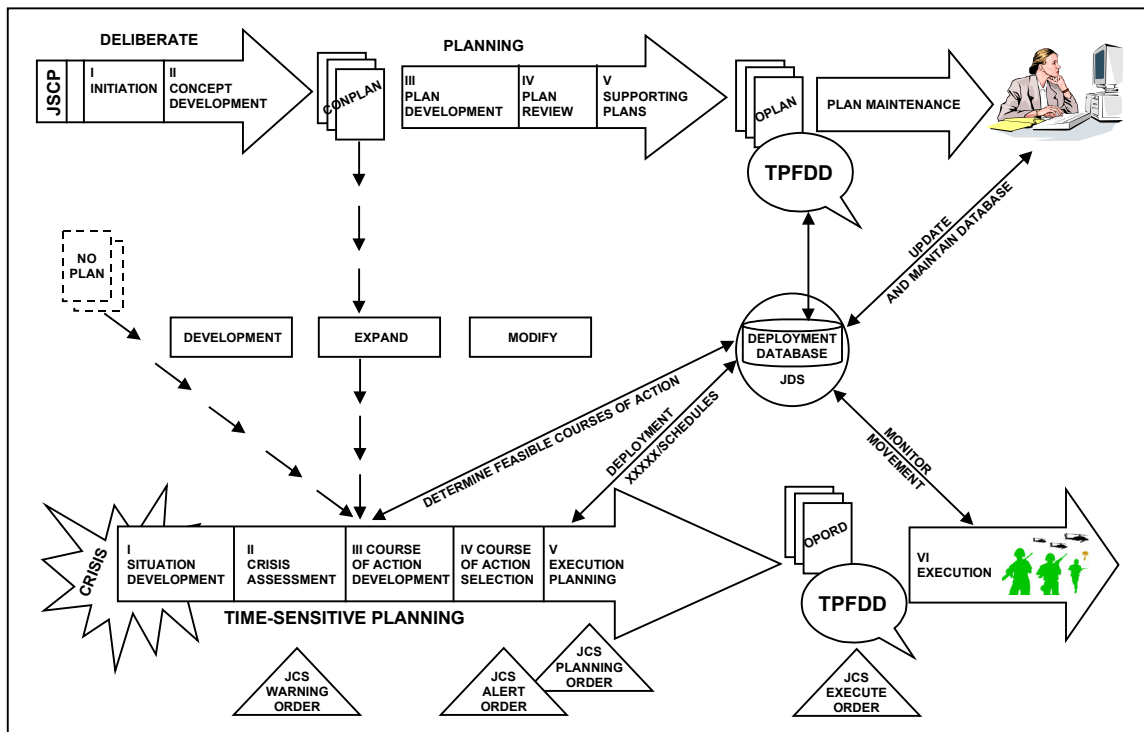


Figure 2-2. JOPES Movement Planning Processes

TC-AIMS II MOVEMENT PLAN

2-6. The TC-AIMS II System creates a product called a movement plan. To avoid confusion between the TC-AIMS II movement plan and the unit movement plan, the TC-AIMS II product will be referred to by its full name, the TC-AIMS II Movement Plan. In it is a wealth of information and data that is both useful and crucial to the formulation of unit movement plans to support a JOPES OPORD or OPLAN and exercises. (Much of the information in the TC-AIMS II movement plan can be used as attachments in the unit movement plan.) However, a TC-AIMS II movement plan,

while defined as a movement plan within the system, *is not* a unit movement plan as envisioned in this FM. TC-AIMS II contributes much to the creation of unit movement plans, *but does not produce them*.

2-7. Units using TC AIMS II that deploy under a JOPES OPLAN must coordinate their incremental movements to be consistent with OPLAN TPFDD requirements, as delineated by unit line numbers (ULN).

- The TPFDD includes personnel requirements, equipment requirements by type and quantity, and movement mode data.
- A ULN is a code that describes a unique increment of a unit. For example, it may be used to identify the advance party of a unit going by air when the unit main body and equipment are going by sealift. The ULN enables the advance party (and the main body) to be identified separately in movement planning for any specific transportation segment.

2-8. TPFDD ULNs normally contain Unit Identification Code (UIC) designations. The MACOM or other higher headquarters assigns ULNs to company level deploying units. Units report their movement data in TC-AIMS II by UIC. It is essential that deploying units use the correct ULN for equipment, personnel, and supplies to be scheduled for movement at the right time by the correct mode. This is key to the JOPES database validation process. An incorrect ULN can overstate or understate airlift requirements and delay passenger and cargo movements. ULNs on the TPFDD divide the unit by transportation mode, ports of embarkation or debarkation, and movement dates.

2-9. Units import their TPFDD data into TC-AIMS II using the JFRG (TC-AIMS II is capable of creating its movement product without a TPFDD). When the TC-AIMS II Movement Plan is created, companies and battalions create a unit deployment list (UDL) by matching their organizational equipment list (OEL) with the TPFDD requirements. The company sends its UDL to the battalion for consolidation with other companies' UDLs. The battalion sends its consolidated UDL to brigade for further consolidation with other battalions' UDLs. The brigade uses the consolidated battalion UDL to create a brigade TC-AIMS II Movement Plan.

UNIT MOVEMENT PLANS

2-10. ULNs on JOPES OPLAN reports divide the unit by transportation mode, ports of embarkation or debarkation, and movement dates. Dates correspond to the established commence movement from origin day (C-day) for the designated plan TPFDD. The unit movement is phased by the following dates relative to C-day:

- **Ready-to-load date (RLD).** The RLD is the TPFDD date when the unit must be prepared to depart its origin. For AC (Active Component) units, origin is the installation and for RC units origin is the mobilization station or site.
- **Available-to-load date (ALD).** The ALD is the TPFDD date when the unit must be ready to load on an aircraft or ship at the POE.
- **Earliest arrival date (EAD).** The EAD is the earliest date that a unit, a resupply shipment, or replacement personnel can be accepted at a POD during a deployment. It is used with

the latest arrival date to describe a delivery window for transportation planning. The supported combatant commander specifies the EAD.

- **Latest arrival date (LAD).** The LAD is the latest date when a unit, a resupply shipment, or replacement personnel can be accepted at a POD to support the concept of operations. It is used with the EAD to describe a delivery window for transportation planning. The supported combatant commander specifies the LAD.
- **Required delivery date (RDD).** The RDD is the date when a unit, a resupply shipment, or replacement personnel must arrive at a POD and complete off-loading to support the concept of operations. The supported combatant commander specifies the RDD.

2-11. **Schedules.** Air Mobility Command publishes airflow schedules to call forward personnel and equipment from the APOE. The call-forward schedules are movement directives that specify when units must have their equipment at the POE to meet ALDs. Based on these schedules, deploying units and intermediate command levels backward-plan movements to the POE. Movement directives (if published) provide windows by mode for cargo arrival at the POE. MTMC performs the same functions for sealift.

DEVELOPING A UNIT MOVEMENT PLAN

2-12. The following paragraphs describe a recommended step-by-step process for developing unit movement plans.

- **Identify what needs to be moved.** Based upon mission requirements (mission, enemy, terrain and weather, troops and support available, time available, civil considerations [METT-TC]) and command guidance, deployment planning must reflect personnel, equipment, supplies, and how the unit will accomplish the move. In the absence of guidance, units plan to deploy with assigned personnel and on-hand equipment. Upon execution, the plan may need to be modified if additional personnel are assigned or equipment cross-leveled to bring the unit to the required readiness level. Units should plan to move their basic load of supplies to sustain their operations upon arrival in the AO. The days of supply, by supply class to be deployed, are normally directed in OPLANs, unit SOPs or MACOM instructions. The UMO must have a detailed listing of each piece of equipment to be deployed. This listing is based on the OEL produced by TC AIMS II. All outsize, oversize, overweight, or hazardous equipment or cargo must be identified as it will require special considerations.

NOTE: If the deploying unit is authorized to draw Army Prepositioned Sets (APS), the UMO and other appropriate unit personnel should review the battlebook within the Automated Battlebook System (ABS) for the site(s) involved in the operation. The ABS provides reference information and real-time visibility of the afloat and land based APS. Each site may require a different mix of advanced party and main body personnel. Within APS, unit prescribed load list (PLL) and authorized stockage list (ASL) items are often prepositioned with unit equipment sets and must be considered when determining deployment requirements.

- **Identify equipment to accompany troops (yellow TAT), equipment needed immediately upon arrival (red TAT), and equipment which does not have to**

accompany troops (NTAT). Yellow TAT must accompany troops and be accessible enroute. Examples include Class I basic load items and individual carry on baggage and weapons. For personnel traveling via commercial air, this is generally the baggage that will fit under the seat. Red TAT must be available at the destination before or upon unit arrival. This equipment may be sensitive cargo that requires special security or handling at the POE or POD. Red TAT must be unitized/palletized and reported on the OEL/UDL. Examples include CBRNE (chemical, biological, radiological, nuclear explosive) equipment, mechanics tools and generators. NTAT equipment is normally shipped by surface and does not accompany the troops. It consists of all other equipment required by the unit to perform its mission.

- **Identify what needs to move by air.** Items to move by air could include personnel, advance parties, baggage, and some equipment. The balance of equipment normally moves by sea. For deployments supporting OPLANs and OPORDs, the TPFDD stipulates the movement mode. This TPFDD mode stipulation is provided to the unit by TC-AIMS II.
 - **Identify hazardous (also sensitive and classified cargo) for packaging, labeling, segregation and placarding for movement.** Appendix D to this manual provides general guidelines for commanders and UMOs concerning general HAZMAT procedures and documentation requirements. Appendix D also provides guidelines for classified and sensitive cargo movement. TC-AIMS II identifies HAZMAT equipment.
 - **Identify bulk cargo that needs to be moved and develop packing lists.** All consolidated cargo (boxed, crated, etc.) loaded in vehicles, containers, and on 463L pallets must display a separate packing list that shows complete contents. Packing lists are not required for items that do not need identification such as empty vehicles, nested cans, or bundled shovels. These items must, however, be listed on the load diagram if loaded in a truck or container. Packing lists are usually distributed based on unit commander or MACOM guidance.
 - **Develop vehicle load plans for unit equipment.** Vehicle load plans are created for organic vehicles and trailers carrying secondary loads. Equipment that cannot be loaded on organic vehicles should be planned for movement by other means (container, commercial rail or highway, other military assets). Additional guidance for preparing vehicles for movement is contained in Appendices E and F of this FM. The ITO or MCT is the POC for obtaining commercial transportation to move equipment to POE that is beyond the unit's organic capability. Transportation support requests are created in TC-AIMS II and provided to the ITO or MCT.
- Unit cargo (vehicles and equipment) is prepared for shipment according to the mode of transportation and the type of move. Preparing vehicles for shipment requires that unit personnel ensure that equipment conforms to clearance and space restrictions. Reducing the profile and footprint of equipment for movement is referred to as “reduction”. Depending on the strategic lift for deployment, full reduction may or may not be required. Reduction details are normally in the MTMC port call message or the operations order for sealift. For deployment by air, reduction is determined by type of aircraft.

- ❑ Vehicle modifications (e.g., shelters, bumper modifications, etc.) made by the unit which change the vehicle configuration, dimensions, or weight must be approved by the unit's MACOM and ultimately by MTMC Transportation Engineering Agency (TEA). Modified vehicles cannot be deployed without this approval. Vehicle modifications must be reflected on the OEL and UDL. Information on dimensions, weights, and cubes for all Army equipment is in CD-ROM and worldwide web versions.
- **Identify BBPCT (Blocking, Bracing, Packing, Crating & Tie-Down) requirements.** All crates, containers, boxes, barrels, and loose equipment on a vehicle must be blocked, braced, and tied-down to prevent shifting during transit. The POC for blocking and bracing requirements is normally the UMC or the BMC.
 - ❑ Appendix E to this FM describes the policy for obtaining and stocking BBPCT materials and related railcar loading equipment for all mobilizing and deploying units. Various FMs and MTMC pamphlets provide guidance for securing loads moving by air, rail, and vehicle.
- **Translate what needs to be moved into transportation terms.** Personnel and equipment data are translated into meaningful transportation terms as unit movement data and recorded on the OEL. During predeployment preparation, units use TC-AIMS II to update the OEL and create the UDL.
 - ❑ An OEL is a computerized listing (in printed and data file formats) of on-hand equipment, personnel and supplies in a unit. The OEL supports cargo manifesting for movements and provides input to transportation managers to identify movement requirements. The UDL has evolved to mean an OEL tailored for a specific move. The UDL shows the equipment, personnel, and supplies that will actually deploy. Both the OEL and UDL are created in TC-AIMS II.
- **Determine how the personnel and equipment will move to the POEs.** In CONUS, wheeled vehicles normally move to the POE in convoy when distances are less than a one day drive (< 400 miles), with tracked vehicles going via military heavy equipment transporters or commercial rail, motor, or inland waterway. Unit personnel usually move to the POE by organic vehicles or by military or commercial buses. Army rotary wing aircraft normally self-deploy to the POE, where they will be disassembled for shipment. TC-AIMS II provides the UMO with the capability to create convoy movement and special hauling permits for submission to the UMC or the BMC.
- **Prepare the unit movement plan.** The administrative, logistical, and coordination requirements for the plan must be determined. Items such as enroute medical, messing, and maintenance for movement to POEs must be coordinated and documented. Appendix L provides a sample movement plan that can be tailored to a deploying unit's requirements.
- **Maintain the movement plan.** Keep the OEL current with changes in unit equipment, personnel, and supplies. Update the UDL as changes occur in the OPLAN, CONPLAN, and commander's intent. The importance of maintaining the OEL, which is updated to produce the UDL, cannot be overemphasized. This is the data used to produce the unit's equipment, supplies, and personnel manifests and military shipping labels (MSLs) and radio

frequency-automatic identification technology (RF-AIT) tags. Errors can result in the unit's cargo being frustrated at the POE.

2-13. TC-AIMS II provides the UMO an information management capability to —

- Extract unit personnel and equipment records from standard Army systems.
- Prepare the UDL identifying equipment, personnel, basic load and sustainment supplies for movement.
- Plan convoy movements and propose convoy routing for movement to POE.
- Create DTR-approved shipping documentation, HAZMAT documentation, and military shipment labels (MSL) for all deploying equipment.
- Prepare RF-AIT tags and MSLs.
- Develop internal deployment schedules.
- Report unit level deployment information to higher headquarters.
- Allow merging of deployment information at higher headquarters.
- Request transport services from the ITO or the MCT.
- Create TC-AIMS II movement programs.
- Create and maintain the unit OEL.
- Create unit transportation support requests.
- Receive TPFDD from the JFRG.

Section 2: MOVEMENT ACTIVITIES

MOVEMENT ACTIVITIES

2-14. Preparation for movement is an ongoing unit activity in peacetime that continues after the unit receives a warning or alert for movement. Units normally identify deployment as a mission essential task and annotate it on their mission essential task list (METL). Predeployment activities are those tasks accomplished by Army units and installations prior to movement to POEs. During normal peacetime operations, predeployment activities involve preparation for force projection, crisis response missions, and field exercises. Units conduct routine movement training to ensure they can meet the Joint Force Commander's mission requirements. When units receive movement guidance for deployment, they complete required predeployment activities. The following discussion covers two major areas: (1) routine deployment preparation activities that units undertake in peacetime to prepare for deployments, and (2) specific predeployment activities that units accomplish based on receipt of initial notification, warning orders, and alert orders.

PEACETIME MOVEMENT PREPARATION ACTIVITIES

UNIT ALERT PROCEDURES

2-15. Division and higher level headquarters are normally alerted for missions through the JOPES procedures. Procedures for alerting subordinate units for movement are contained in higher headquarters SOPs, deployment regulations, and unit movement or deployment SOPs. These SOPs normally contain unit alert reporting requirements. Units maintain alert rosters for contacting unit personnel. Alert procedures are validated and tested according to unit SOP or other direction.

IDENTIFYING SUPPORT REQUIREMENTS

2-16. Units generally require extensive support to prepare for movements. This support can include assistance related to equipment inspection, maintenance, property transfer and loading. It also can include assistance in the marshaling and staging areas, and help with predeployment and life support activities. These support requirements are usually identified in division and installation SOPs. Installation and non-deploying units are normally tasked to provide this support to deploying units. Additional support is available from MTMC which dispatches deployment support teams where needed. Typical deployment support requirements include:

- **Life Support.** The supporting installation or area command normally provides life support at staging, marshaling areas, and POEs. Non-deploying units can also be designated to provide this support.
- **Materiel Handling Equipment.** Units must identify requirements for MHE and container handling equipment (CHE). Requests for support must be specific and identify the exact weight, dimensions, and characteristics of what must be moved, lifted, or loaded.
- **Container Movement.** Units may be provided containers for the movement of supplies and equipment, or have unit-owned containers without organic prime movers. Requests for spotting and moving containers are coordinated with the ITO or the MCT.

- **Purging Operations.** The supporting installation or area command provides a purge capability to ensure bulk fuel carriers are vapor free for movement.
- **Waste and Excess Fuel.** Deploying units that need to drain fuel tanks or remove excess fuel must plan for proper disposal and reclamation of the drained fuel. Units must plan for hand pumps and containers for contaminated fuel, coordinate for disposal of waste fuel, and arrange any transportation needed.

SOLDIER READINESS PROCESSING (SRP)

2-17. The goal of the SRP program is that all soldiers are maintained administratively ready for deployment at all times. Soldier readiness is a continuous process that involves both the unit commander and the installation staff. Headquarters, Department of the Army requires that specific administrative deployment processing requirements be checked and updated prior to individual soldier or unit movement [SRP requirements are categorized by levels ranging from Level 1 (basic movement SRP requirements) to level 4 (deployment area and mission unique SRP)]. Prior to soldier or unit movement in support of combat or contingency operations, commanders with the assistance of a soldier readiness processing team (SRP Team) physically review on-site processing requirements in levels 1 through 4 within the 30 days prior to departure. AR 600-8-101, Personnel Processing, establishes readiness requirements for each of the levels, and MACOMs and installations ensure they are met.

2-18. In addition to unit actions, the supporting SRP Team normally performs an annual SRP check. The team checks personnel, medical, dental, legal affairs, training, and security clearance requirements IAW the appropriate SRP level. The SRP Team also performs SRP checks within the 30 days prior to actual deployment. The team normally consists of representatives from the following installation staff agencies: personnel, chaplain, medical, dental, provost marshal, finance, security, and legal.

MOVEMENT TRAINING

2-19. Units are required to have an appropriate number of personnel trained to perform special movement duties previously discussed in chapter one. These special duties include the UMO, the unit loading teams, the hazardous cargo certifying officials, and the air load planners. Each MACOM has specific requirements and policies for appointing and training personnel in these positions. Many commands and installations maintain a local capability to provide deployment training because all deployable units require personnel trained to perform these duties.

PREDEPLOYMENT ACTIVITIES

2-20. Predeployment activities are those that units accomplish based on initial notification, warning orders, and alert orders for operations. These activities may overlap in the deployment process or occur in a different order than presented here, depending on time available between initial notification and actual deployment execution. The support roles of the installation and other units for support of the deploying unit are discussed in the following paragraphs.

INITIAL NOTIFICATION ACTIVITIES

2-21. Following warning order receipt, the deploying unit headquarters evaluates the ability of its subordinate units to meet mission requirements. If a unit needs reorganization or augmentation, a plan is developed to meet established requirements through cross-leveling or outside augmentation. Using TC-AIMS II, personnel adjustments are made to the OEL, then the UDL and equipment and supplies adjustments are made directly to the UDL.

2-22. The deploying unit creates a UDL by identifying items from the OEL for deployment. It verifies the shipping information (size, weight, line identification number [LIN], model, and configuration) of the equipment selected for the UDL. The deploying unit also begins preparing other required deployment documentation such as HAZMAT certification.

2-23. Upon notification of a potential deployment, the unit reviews its deployment readiness status. The deploying unit's higher headquarters confirms readiness status of all its units and identifies actions needed to raise deficient units to standard. The deploying unit also begins gathering information to identify any special needs (e.g., clothing, equipment) based upon climate, location, or current unit configuration. In reviewing and determining its readiness status, the deploying unit:

- Updates its OEL and develops a UDL based upon personnel, on-hand equipment, and supplies.
- Identifies equipment shortages (long-term maintenance problems and actual equipment on-hand shortages) and inventories on-hand unit basic load (UBL) items.
- Reviews and updates unit training status.
- Reviews unit maintenance posture; begins expediting maintenance fixes on organizational equipment; conducts scheduled services; and calibrates test, measurement, and diagnostic equipment.
- Identifies personnel shortfalls by military occupation specialty (MOS) and grade, and prioritizes them for fill.
- Reviews leave and pass status of personnel. Takes action as necessary.
- Conducts an SRP review. (See previous SRP discussion at para 2-17 and 2-18.)
- Updates and submits the unit status report (USR) as required.
- Updates personnel data (clothing sizes) for issue of organization clothing and individual equipment.
- Reviews and tests unit recall procedures.
- Reviews and updates vehicle load plans, packing lists, and movement plans.
- Validates existing requisitions and takes action as required.
- Verifies quantity and serviceability of available containers.

2-24. The Army MACOM normally passes a JCS project code to its subordinate elements which allows units to commit resources for deployment preparation. Deploying units receive the project code and funding guidance and use them to begin requisitioning necessary supplies, equipment, and unit basic loads for deployment. To improve its readiness posture, the deploying unit cross-levels equipment and submits requisitions for needed supply classes. The deploying unit's higher headquarters may direct supply levels. Requisitions may be filled at point of origin and incorporated into the UDL, received at the POE and added to the UDL, or shipped separately to arrive at the POD. The deploying unit identifies and sends unit shortfalls through appropriate automated

systems. It verifies unit deployment requirements and submits requisition documents for equipment and supply shortfalls and to fill personnel shortages. It also receives confirmation on availability of Army prepositioned stocks. If stocks are available, the unit can begin planning the UDL and adjusting equipment preparation priorities. The unit also validates its external support requirements for containers, 463L pallets, surface transportation, BBPCT, and MHE and CHE.

2-25. Based on its validation of BBPCT requirements, the unit requests supplies to support movement operations (BBPCT, dunnage, and pallet covers). It prioritizes personnel fill requirements (mission essential positions) and submits them to the installation and higher headquarters.

2-26. The installation and supporting units (sometimes known as “push units”), if designated, have specific responsibilities to support the deploying unit. These responsibilities are normally documented in higher headquarters and installation SOPs or deployment regulations. Upon initial movement notification, the installation reviews and prepares to implement its deployment support requirements. Specific installation activities may include outload support (e.g., providing MHE, spotting and picking-up of containers and 463L pallets, etc), operation of a departure airfield control group (DACG), and formation of a port support activity (PSA).

2-27. Supporting units include non-deploying combat, combat support, and combat service support units from the installation, other supporting installations, area support groups, and provisional task organizations. These units assist the deploying unit in packing, uploading equipment, loading and documenting containers, training, and moving personnel and equipment as required

MOVEMENT ORDER ACTIVITIES

2-28. Receipt of the movement order causes the unit to refine its movement plan based on information provided in the alert order and verifies or updates the following:

- Maintenance lead times and maintenance priorities for deploying equipment.
- Requisition and personnel fill times.
- Train-up completion time (if required) for unit movement personnel.
- Container availability (pack, load, certify, and transport to POE) time.

2-29. If the deploying unit is drawing APS, the unit deploys or prepares to deploy the APS advance party and unit representatives to the survey, liaison, reconnaissance party, and the off-load preparation party. These soldiers coordinate with the gaining command and act as liaison in preparing for reception and staging. (See Chapter 5.)

2-30. During warning order activities, the deploying unit continues cross-leveling equipment and submits requisitions for needed supplies that were not identified earlier. As in the initial notification, supply levels may be directed in the alert order or by the deploying unit’s higher headquarters. Requisitions may be filled at point of origin and incorporated into the UDL, received at the POE and added to the UDL, or shipped separately to arrive at the POD.

2-31. Refinement of the UDL is a continuing process with the deploying unit based on unit status and changes imposed as a result of force tailoring or higher headquarters guidance. The unit verifies equipment status compared to the UDL and updates load plans, equipment dimensions and weight, and HAZMAT shipping declarations. Once corrections are made, the unit prints and applies military

shipping labels (MSLs; DD Form 1387) to supplies and equipment. Additionally, the red and yellow TAT, and NTAT equipment are identified (See para 2-12). The unit finalizes the UDL as early as possible.

2-32. Unit equipment must be safeguarded IAW governing regulations and SOPs, while it is being transported to and staged at installations, marshalling areas, and POEs. Beyond usual unit safeguarding provisions, certain cargo categories require care while in transit and some special cargo categories require extraordinary protection and monitoring while in transit. Figure 205-1, DOD Regulation 4500.9-R, the Defense Transportation Regulation (DTR), establishes the specific governing requirements to be followed when moving arms, ammunition, and explosives. Figure 205-2 of the DTR does the same for classified material. The DTR assigns various levels of required protection and monitoring to material based on categories of risk. Measures of protection and monitoring range from continuous surveillance to a simple seal used in shipping. The DTR establishes protection requirements for air, rail, water, and motor transport and outlines the Transportation Protective Service means available in the transportation community to meet them.

Chapter 3

Movement By Mode

This chapter provides general planning and coordination guidance for unit movements within Continental United States (CONUS) and Outside Continental United States (OCONUS) by rail, highway, and air.

Section 1: CONUS

CONVOY MOVEMENTS

3-1. Within the United States, each state establishes rules, procedures, and laws that govern the use of public highways. Counties, cities, and municipalities establish and add restrictions for the use of their respective county or city routes. No vehicular movement that exceeds these legal limitations, or that subjects highway users to unusual hazards (including movement of explosives or other dangerous cargo), is made over public highways without the permission of the appropriate authority. Military convoys require approved convoy clearances and special hauling permits to travel on public highways and roads.

3-2. Units moving with highway-capable tactical vehicles located within a one-day (400 miles) road march of the MS or POE usually move via organic means. Highway-capable vehicles are those wheeled (not tracked) vehicles that can be driven or towed on the nation's highways. Requests from AC units are submitted through the installation UMC. Convoy clearance requests and special hauling permits may be created using TC-AIMS II.

Obtaining Convoy Clearance and Permits

3-3. A military convoy is defined as any group of six or more vehicles temporarily organized to operate as a column, with or without escort, proceeding together under a single commander. Ten or more vehicles, dispatched in less than groups of six, traveling the same route to the same destination, in an hour, are also a convoy. During mobilization or deployment, vehicle infiltration (movement of vehicles in units of less than convoy size on a public highway) is prohibited, therefore all movement through a mobilization station (MS) or power projection platform (PPP) or port is considered a convoy. Local policy may be more restrictive.

3-4. The Adjutant General of each State Area Command (STARC) appoints a Defense Movement Coordinator (DMC) who is the technical expert for military highway movement in the state. The DMC approves convoy movements, and coordinates and obtains permits for movement of oversize and overweight equipment. Routine convoy clearance requests are submitted to the DMC through two different channels, depending on the originator:

- AC units submit their request to the installation UMC for coordination with the ITO and submission to the STARC DMC for approval.
- Reserve component (RC) units submit their request through their appropriate chain of command or as directed to their home station (HS) state STARC DMC for coordination and approval.

3-5. Oversize or overweight vehicles are vehicles with sizes or weights exceeding the legal limitations prescribed by the state or local authorities in which the vehicles are operating. Movement of these vehicles require special approval by state and local authorities. All requests for special hauling permits (for oversize and overweight vehicles) are submitted through the same channels as convoy requests for coordination by the DMC and issuance of the necessary permits.

3-6. Vehicles operated in a convoy over public highways are marked with the appropriate signs and control numbers. Convoy vehicles display a blue flag on the lead vehicle, and a green flag on the trail vehicle unless otherwise specified by local regulations. Convoy vehicles use headlights on at all times. When halted on road shoulders, vehicles equipped with amber flashing lights or emergency systems also operate those lights. Units comply with other precautionary measures prescribed by state or local authorities.

3-7. The UMO coordinates with the UMC and higher headquarters to request convoy clearances and special hauling permits needed to move oversized or overweight vehicles with organic capability via highway. The UMC or higher headquarters submits a clearance request to the STARC DMC. The DMC is responsible for processing all convoy movements through the Mobilization Control (MOBCON) system. The DMC uses MOBCON to schedule road use, deconflict, and generate an approved Convoy Movement Order (CMO). The approved convoy clearance (CMO) is provided to the requesting UMC or headquarters for final issuance to the moving unit. The MOBCON generated CMO provides routing, a time table, a convoy clearance number, and secures routing and convoy visibility through all states involved

For more information on convoy operations see Appendix C, Convoy Operations.

RAIL MOVEMENTS

3-8. Responsibility for planning and executing rail movements is split between the unit and the ITO. The unit determines movement requirements and submits them to the BMC. The brigade movement officer (BMC) validates and consolidates the movement requirements prior to forwarding them to the supporting UMC.

3-9. The UMC creates rail load plans, using the rail load planning tool within TC-AIMS II, to identify the amount and type of rail assets needed to move unit equipment from the installation. After reviewing these plans, the ITO makes arrangements to have rail equipment spotted for loading to meet scheduled arrival dates in the TPFDD (based on dates specified by the unit). For those items of equipment designated to move by commercial rail, the ITO designates a load-out staging area on the installation. The unit utilizes fixed or hand-held bar code readers or RF-Tag readers to identify unit equipment that is being staged for rail loading. This information is then up-loaded to TC-AIMS II and sent to the In-transit Visibility (ITV) regional server, which provides it to the Global Transportation Network (GTN).

3-10. The UMC is responsible for ensuring coordination with the Facilities Engineer for obtaining sufficient BBPCT material. The UMC is responsible for inspecting and approving rail car loads in conjunction with the railroad inspector.

3-11. Units are responsible for preparing their equipment for rail loading. This includes packing, crating, banding, and blocking and bracing secondary loads. Units are also responsible for actual loading and tie-down of all equipment loaded. Units load railcars under the technical supervision of

the UMC. Units can generate automated rail load plans using TC-AIMS II. The ITO and the railway agent are ultimately responsible for approving all rail loads.

3-12. The ITO is the official liaison with MTMC and the railway agent. ITO personnel inspect all railcars for serviceability before units begin loading, and provide technical advice to units on blocking, bracing and tie down materiel. The unit provides the ITO with all required HAZMAT documentation.

3-13. Units can and should request assistance from the MTMC Operations Center at Fort Eustis, Virginia to assist in its preparation for movement. Unit movement teams from deployment support brigades are available to be dispatched to support unit preparation for movement. Units request MTMC Operations Center assistance through the UMC to the ITO or installation support. (See Chapter 4, paragraph 4-7.)

3-14. The ITO is responsible for obtaining rail cars to support unit movement and for preparing bills of lading. The ITO validates railcar requirements based on the shipping configuration of the items being shipped. Accurate UDL data is essential to this effort. With the data from the UDL, the ITO can prepare the bill of lading. Alternatively, the ITO can scan the military shipping labels (MSL) on the equipment to prepare the bill of lading.

3-15. The installation Director of Public Works (DPW) is normally responsible for providing units blocking and bracing materials needed to load military equipment on railcars. Units request these materials as far in advance as possible. The DPW also provides tools and assistance as required.

3-16. The preferred types of flatcars for unit moves are chain-equipped flatcars. These flatcars usually reduce the need for blocking and bracing material, and reduce loading times and line-haul transportation costs. Flatcars without side rails are easier to load, and wider vehicles more easily accommodated. The most common and expeditious method of loading vehicles on flatcars is the circus method. This method uses flatcars as a roadbed with spanners placed between cars. Tracked vehicles can be loaded without spanners when flatcars are equipped with short drawbars. After the loading sequence for the train has been determined, the vehicles are staged in order. All vehicles are loaded onto the rearmost car and moved forward to their assigned locations. The following is general rail movement planning guidance for units:

- Fill equipment with fuel to capacities as directed.
- Do not load ammunition and fuel, other than that fuel in vehicle fuel tanks, together on any unit vehicle of a rail movement.
- Place warning placards on all sides of hazardous cargo loads. Do not stencil permanent placards on vehicles.
- Load unit equipment in organic vehicles to the greatest extent practicable. Secure equipment loads properly.
- Lock and seal sensitive arms, ammunition, and explosives in approved security containers. If railcar design permits, place security containers door-to-door to prevent unauthorized access to sensitive material. If container doors do not match, place an empty container against the loaded container to ensure there is a door-to-door match.
- Take care to protect older series vehicles against intransit damage by rolling down side windows, lowering windshields, and turning mirrors inward. In newer series vehicles, (e.g., Palletized Load System, Heavy Equipment Transporter System, and Heavy Expanded Mobility Tactical Truck) the windows must remain up because of potential rain damage to

the electronic transmission and central tire inflation systems. Protect open window glass with plywood, cardboard, or a double layer of bubble wrap. Consider destination and the immediate necessity for mission-ready vehicles when weighing potential damage against protective material costs.

- Do not cover headlights, windshields, or mirrors with tape.

3-17. At the railhead, an officer is appointed to oversee rail loading operations. The railcar loading site includes a medical aid station and should include command and control facilities, warming tents, and other needed life support services.

3-18. Railcars must be off-loaded promptly at destination to allow them to return for further use and to avoid payment of demurrage or detention charges. Tariffs usually allow 48 hours free time for unloading commercial railcars. Units must remove blocking, dunnage, and banding from unloaded cars before releasing to the carrier.

For more information on rail operations see Appendix A, Railguards and Supercargoes.

AIR MOVEMENT

3-19. A key air movement planning consideration is whether the movement is tactical (combat) or nontactical (administrative). A nontactical movement is a movement of troops and equipment that is organized, loaded, and transported to expedite movement and conserve time and energy when no hostile interference is anticipated. It emphasizes economical use of the aircraft cabin space and maximum use of the allowable cabin load. Tactical movements are organized, loaded, and transported to aid accomplishment of a tactical mission. The unit arranges personnel, equipment, and supplies to support the tactical operation. Proper use of the aircraft allowable cabin load is still an important factor, but the commander's sequence of employment has priority. Army units plan for nontactical movements unless they are conducting operations that anticipate hostile reception.

3-20. For movements conducted under Joint Operations Planning and Execution System (JOPES), the TPFDD identifies the movement mode. It can plan movement for personnel and equipment by air, or the majority of personnel could move by air with the equipment moving by sea. In the latter case, the TPFDD synchronizes the air movement with equipment arrival at sea port of debarkation (SPOD).

3-21. USTRANSCOM, using its air component, the Air Mobility Command, is responsible for strategic airlift. Airlift assets can be military, commercial, or a combination of both. For JOPES moves, units may not be notified of the specific type of aircraft being used until after the unit line number (ULN) has been validated for movement. For non-JOPES moves, units request military airlift by submitting a SAAM request and/or other required documentation to the installation UMC.

3-22. There are several methods for determining aircraft sortie requirements. (A sortie is one mission by a single plane.) The Automated Air Load Planning System (AALPS) estimates the number of aircraft required to move the equipment and passengers. The AALPS database contains weight and dimensional information for Army and other Services' equipment. The planner can select from the equipment list within AALPS to determine aircraft requirements. AALPS can also generate load plans for individual aircraft. A second method for gross planning is to use total vehicle, cargo, and personnel weight to determine aircraft required. MACOM planners normally use this method to quickly approximate airlift requirements. A third option is the "type load" method. This method

recognizes that in most unit air movements, a sizeable number of the aircraft loads contain the same items of equipment and quantity of personnel. Preparing type loads simplifies planning.

3-23. When alerted for movement by strategic airlift, units use TC-AIMS II to develop their UDL by tailoring their organization equipment list (OEL). After the brigade reviews and approves the UDL, it transmits the information to higher headquarters.

3-24. The planner uses AALPS to plan the placement of personnel and each vehicle and item of equipment on the aircraft. TC AIMS II provides passenger and cargo manifests. Following is general guidance for air movement planning:

- Provide a qualified driver for each prime mover.
- Disperse equipment of the same type among as many different aircraft as possible to minimize the adverse impact should a particular aircraft abort.
- Indicate the priority of movement by assignment of aircraft load numbers (e.g., load or chalk 2 would be the second to arrive at destination).
- Load unit equipment and supplies, to include minimum essential equipment and supplies to accompany troops (TAT), into cargo vehicles moving by air, as secondary loads to the maximum extent possible.
- Palletize all general cargo not loaded on vehicles on 463L pallets. Request issue of 463L pallets and nets from the ITO or other designated staff.
- Have units prepare, document, and certify vehicles, HAZMAT, and other cargo for air movement.
- Ensure drivers have keys to unlock any unit equipment and containers (to include footlockers).
- Load Prime movers and trailers on the same aircraft.
- Apply an RF tag or an MSL with a bar coded TCN to unit equipment and cargo.
- Ensure hazardous cargo certifiers are available until cargo is accepted for air movement.

3-25. For Joint Chief of Staff (JCS) directed unit movements, airlift requirements are registered and validated in the JOPES. A unit air movement requires careful load planning, selection of equipment, and personnel processing. It requires transported units to be convoyed, marshaled, received and inspected at APOE; and finally, outloaded to the aircraft. It is a complex process requiring careful planning, prudent execution, and attention to detail at every step.

3-26. The parent organization (or home station commander) from which units moving originate, is responsible for assigning, equipping, and training personnel to establish and operate the A/DACG. In CONUS, installations tasked in AR 5-9 and FORSCOM/ARNG Reg 55-1 are responsible for providing A/DACG support.

3-27. Using AALPS, the UMO prepares initial air load plans to identify the amount and type of strategic airlift assets required to execute the plan. The deploying unit (as coordinated by its UMO) is also responsible for:

- Preparing cargo (weigh, mark, measure, load, secure, manifest, and compute and mark center of balance).
- Preparing passenger manifest.
- Assuring proper preparation and certification of hazardous cargo.
- Preparing and certifying load plans.

- Providing load teams.
- Loading, securing, and off-loading cargo.
- Providing shoring, dunnage, and vehicle operators.

COMMERCIAL TRUCK MOVEMENT

3-28. When a unit does not have enough organic assets to move its equipment, it coordinates with the installation UMC for movement of unit assets by commercial truck. The unit ensures cargo and equipment is properly marked and prepared for commercial transport.

3-29. When the shipment departs, the ITO scans the equipment and inputs the information into TC-AIMS II which provides the information to the local ITV server. The local ITV server provides the information to GTN.

3-30. When requested by the moving unit, the ITO arranges for commercial trucks to move the unit equipment to the POE. The unit ensures cargo and equipment is properly marked and prepared for transport.

3-31. The UMC coordinates with the ITO to make arrangements for commercial trucks. These services include shipment of sensitive items and hazardous materials

Section 2: OCONUS

CONVOY MOVEMENTS

3-33. Responsibility for highway regulation rests with commanders having area jurisdiction. The highway regulation mission is performed OCONUS by:

- The senior movement control element (MCE) in the theater.
- The transportation battalion in the corps rear area.
- The division transportation officer in the division rear area.
- The brigade S4 in the brigade rear area.

3-34. The commander who controls the area through which convoys move exercises highway regulation authority with its movement control elements. Each organization at corps and above includes a highway traffic headquarters that prioritizes and schedules convoy traffic on the road network within its area of operation. The division transportation officer, augmented by a division support movement control team (MCT), executes this mission for the division. Unit commanders request permission to use the division road space in accordance with the division highway regulation plan. Units use TC-AIMS II to create clearance and special hauling requests and forward them to an MCT. The MCT forwards the request to the appropriate authority. The approving authority takes action and returns the clearance to the unit.

Using TC AIMS II to Plan Convoy Movements

3-35. Convoy clearance requests are a form of message that details the itinerary of the move, the number and types of vehicles, and movement planning information. TC-AIMS II provides a convoy-planning tool that the S3, S4, or UMO uses to develop convoy movement schedules for unit vehicles. The TC AIMS tool provides for organizing vehicles into convoys, serials, and march units using standard command parameters for vehicle spacing and number of vehicles per march unit/serial. (The standard parameters identify convoy speeds (minimum and maximum) for the type vehicle and area of operation.)

3-36. March tables and convoy vehicle listings for the proposed convoy are an output of TC-AIMS II. If the convoy requires clearance to use the route selected, TC-AIMS II prepares a convoy clearance request. The unit sends the requests to the area highway regulation authority at the movement control headquarters. The movement control headquarters coordinates with host nation authorities to secure the route clearance. At OCONUS locations, a movement regulating team equipped with TC-AIMS II and AIT interrogators track convoy movements. During the convoy movement, convoy vehicles equipped with the Movement Tracking System (MTS) can transmit the convoy coordinates to the MTS control station.

For more information on convoy operations see Appendix C, Convoy Operations.
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RAIL MOVEMENTS

3-37. Responsibility for planning and executing OCONUS rail movements is split between the units and the MCT. The units determine movement requirements and submit them to the BMC. The

BMC consolidates and validates the movement requirements and forwards them to the supporting MCT.

3-38. The MCT obtains railcars based on unit movement requirements. MCT personnel compute railcar requirements based on the shipping configuration of the items being shipped. Accurate UDL data is essential. The unit provides required HAZMAT documentation, and based on data from the UDL, the MCT prepares the bill of lading or the freight warrant. Alternatively, the MCT can scan the MSLs on the equipment to prepare the bill of lading or the freight warrant.

3-39. The MCT is the official liaison with the HN railway agent. MCT personnel inspect all railcars for serviceability before units begin loading, and provide technical advice to units on blocking, bracing and tie down materiel. The area support group (ASG) or base support battalion (BSB) is normally responsible for providing units blocking and bracing materials needed to load military equipment on railcars. Units request these materials as far in advance as possible. The ASG or BSB also provides tools and assistance as required.

3-40. Units are responsible for preparing their equipment for OCONUS rail loading. This includes packing, crating, banding, and blocking and bracing secondary loads. Units load railcars under the technical supervision of the MCT. (In extraordinary circumstances, TOE rail teams assist in loading railcars.) Units can generate automated rail load plans using TC-AIMS II. The MCT and the HN railway agent are ultimately responsible for approving all rail loads.

3-41. The preferred types of flatcars for unit moves are chain-equipped flatcars. This type flatcar usually reduces the need for blocking and bracing material, and reduces loading time and line-haul transportation costs. Flatcars without side rails are easier to load, as wider vehicles are more easily accommodated. The most common and expeditious method of loading vehicles on flatcars is the circus method. This method uses the flatcars as a roadbed with spanners placed between cars. Tracked vehicles can be loaded without spanners when flatcars are equipped with short drawbars. After the loading sequence for the train has been determined, the unit stages the vehicles in load sequence. All vehicles are loaded onto the rearmost car and moved forward to their assigned locations. The following is general rail movement planning guidance for units.

- Fill equipment with fuel to capacities as directed.
- Do not load ammunition and fuel, other than that fuel in vehicle fuel tanks, together on any unit vehicle for rail movement.
- Place warning placards on all sides of hazardous cargo loads. Do not stencil permanent placards on vehicles.
- Load unit equipment in organic vehicles to the greatest extent practicable. Take care to make certain that equipment loads are secured properly.
- Lock and seal sensitive arms, ammunition, and explosives in approved security containers. If railcar design permits, place security containers door-to-door to prevent unauthorized access to sensitive material. If container doors do not match, place an empty container against the loaded container to ensure there is a door-to-door match.
- Take care to protect older series vehicles against intransit damage by rolling down side windows, lowering windshields, and turning mirrors inward. In newer series vehicles, (e.g., Palletized Load System, Heavy Equipment Transporter System, and Heavy Expanded Mobility Tactical Truck) the windows must remain up because of potential rain damage to the electronic transmission and central tire inflation systems. Protect open window glass with plywood, cardboard, or a double layer of bubble wrap. Consider destination and the

immediate necessity for mission-ready vehicles when weighing potential damage against protective material costs.

- Do not cover headlights, windshields, or mirrors with tape.

3-42. At the railhead, an officer is appointed to oversee rail loading operations. The rail-loading site includes a medical aid station and may include command and control facilities, warming tents, and other required life support services.

3-43. Railcars must be off-loaded promptly at destination to allow their return for further use and to avoid payment of demurrage or detention charges. Tariffs usually allow a limited number of hours free time for unloading commercial railcars. Remove blocking, dunnage, and banding from unloaded cars before releasing to the carrier.

For more information on rail operations see Appendix A, Railguards and Supercargoes.
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AIR MOVEMENT

3-44. For movements conducted under JOPES, the TPFDD identifies the movement mode. It can plan movement for personnel and equipment by air, or the majority of personnel could move by air with the equipment moving by sea. In the latter case, the TPFDD synchronizes the air movement with equipment arrival at SPOD.

3-45. USTRANSCOM, using its air component, the Air Mobility Command, is responsible for strategic airlift. Airlift assets can be military, commercial, or a combination of both. For JOPES moves, units may not be notified of the specific type of aircraft being used until after the unit line number (ULN) has been validated for movement. For non-JOPES moves, units request military airlift by submitting a SAAM request and/or other required documentation to the installation UMC.

3-46. When moving from OCONUS to CONUS the UMO is responsible to have customs officials observe the packing process and attach a seal of approval. UMOs ensure that all equipment meets air shipment standards.

3-47. A key planning consideration is whether the movement is tactical (combat) or nontactical (administrative). This depends on the unit's mission in the theater. A nontactical movement is a movement of troops and equipment that is organized, loaded, and transported to expedite movement and conserve time and energy when no hostile interference is anticipated. It emphasizes economical use of the aircraft cabin space and maximum use of the allowable cabin load. Tactical movements are organized, loaded, and transported to aid accomplishment of a tactical mission. The unit arranges personnel, equipment, and supplies to support the tactical operation. Proper use of the aircraft allowable cabin load is still an important factor, but the commander's sequence of employment has priority. Army units plan for nontactical movements unless they are conducting operations that anticipate hostile reception.

3-48. There are several methods for determining aircraft sortie requirements. (A sortie is one mission by a single plane.) The Automated Air Load Planning System (AALPS) estimates the number of aircraft required to move the equipment and passengers. The AALPS database contains weight and dimensional information for Army and other Services' equipment. The planner can select from the equipment list within AALPS to determine aircraft requirements. AALPS can also generate load plans for individual aircraft. A second method for gross planning is to use total vehicle, cargo,

and personnel weight to determine aircraft required. MACOM planners normally use this method to quickly approximate airlift requirements. A third option is the “type load” method. This method recognizes that in most unit air movements, a sizeable number of the aircraft loads contain the same items of equipment and quantity of personnel. Preparing type loads simplifies planning.

3-49. When alerted for movement by strategic airlift, units use TC-AIMS II to develop their UDL by tailoring their OEL. After the brigade reviews and approves the UDL, it transmits the information to higher headquarters.

3-50. The planner uses AALPS to plan the placement of personnel and each vehicle and item of equipment on the aircraft. TC AIMS II provides passenger and cargo manifests. Following is general guidance for air movement planning:

- Provide a qualified driver for each prime mover.
- Disperse equipment of the same type among as many different aircraft as possible to minimize the adverse impact should a particular aircraft abort.
- Indicate the priority of movement by assignment of aircraft load numbers (e.g., load or chalk 2 would be the second to arrive at destination).
- Load unit equipment and supplies, to include minimum essential equipment and supplies to accompany troops (TAT), into cargo vehicles moving by air, as secondary loads to the maximum extent possible.
- Palletize all general cargo not loaded on vehicles on 463L pallets. Request issue of 463L pallets and nets from the MCT or other designated staff.
- Have units prepare, document, and certify HAZMAT, vehicles and other cargo for air movement.
- Ensure drivers have keys to unlock any unit equipment and containers (to include footlockers).
- Load Prime movers and trailers on the same aircraft.
- Apply an RF tag or an MSL with a bar coded TCN to unit equipment and cargo.

USING HOST NATION (HN) ASSETS

Using HN Assets

3-51. The United States has agreements with some countries that provide for coordinated tasking of HN transportation assets when US Army assets are not available to handle military cargo. When Army assets are not available, the MCT requests the senior movement control element to task HN assets under the provisions of these agreements.

Using Theater Support Contractor Assets

3-52. MTMC is responsible for contracting for and coordinating use of HN theater support contractor assets until a theater headquarters can assume the mission. The MCT identifies a commercial operator identified in the origin MCT's geographic area. Commitments flow through predetermined channels developed between the senior movement control element and the commercial carrier. If the commercial carrier cannot support the transportation request for any reason, it notifies the MCT immediately. The MCT attempts to establish an alternate delivery date that satisfies the consignee; selects another mode; requests HN assets; delays lower priority shipments; or requests assistance from its headquarters.

Chapter 4

Operations at the Port of Embarkation (POE)

4-1. There are two types of ports of embarkation (POE): sea and aerial. Both types of POE must have communications and be able to provide In-transit Visibility (ITV) of unit equipment during this phase of movement. This capability must extend to providing advance arrival information to the Port of Debarkation (POD).

Section 1 - SEA

4-2. Battalions and companies deploy unit personnel, supplies, and equipment by sea through a port that is commanded or contracted by the Military Traffic Management Command (MTMC). Before being loaded on vessels, unit personnel, supplies, and equipment are held in the port staging area to prepare for shipment. Before moving to the port staging area, the unit, its supplies and equipment may be assembled in a marshaling area. There is a distinction between the two areas, although they serve much the same purpose. In a marshaling area, the owning command retains responsibility and accountability for the shipment. Once in the staging area, the port commander assumes custody of equipment and supplies. Both marshaling and staging areas are discussed in the paragraphs following.

MARSHALING AREA

4-3. When port call instructions are received from MTMC Operations Center, units are notified when and where to move their personnel, supplies, and equipment. This destination may be a port marshaling area or a port staging area. Support installations (SI), area support groups (ASG), or other organizations may be tasked to operate the marshaling area.

4-4. When deemed necessary, support installations, area support groups, or other organizations are tasked to establish a marshaling area near the port staging area. The primary purpose of a marshaling area is to provide a location to receive unit personnel, equipment and supplies, and configure them for overseas movement by sea, prior to entering the staging area. Accountability for personnel, equipment, and supplies remains with the deploying unit in the marshaling area. The following activities take place in the marshaling area:

Accounting and Coordination

- The flow of deploying personnel is managed as they arrive and depart the marshaling areas and staging areas, accounting for unit equipment, basic load containers, and pre-configured Equipment Deployment Storage Systems (EDSS) containers using Automatic Identification Technology (AIT) devices. AIT tags and Military Shipping Labels (MSLs), are created using Transportation Coordinator's Automated Information for Movement System II (TC AIMS II). AIT data is sent to the ITV regional server using TC AIMS II, and ultimately is dispatched from ITV to Global Transportation Network (GTN).
- Unit personnel, supplies, and equipment, and other cargo are moved from the marshaling area when it is called forward to the staging area. Coordination with MTMC headquarters (or one of its deployment teams) is established to ensure a smooth transition to the staging area.

Preparation and Checks

- Unit equipment and supplies are checked to ensure they are properly labeled and tagged and accompanied by proper documentation.
- Cargo lashings and height limitations are checked to ensure that the loads are within parameters for shipment. Secondary loads (unit supplies and equipment on vehicles) are checked to ensure they are properly blocked, braced, and secured.
- Preventive maintenance checks and services (PMCS) are conducted and any required organizational or direct support maintenance accomplished, and fuel levels in vehicles and equipment being shipped adjusted to proper levels. AIT tags are checked to make sure they are working.
- Hazardous cargo is checked to ensure it is segregated, properly classified, described, packaged, marked, labeled, and in proper condition for transportation IAW Code of Federal Regulation (CFR) 49 and other prescribed regulations or directives.

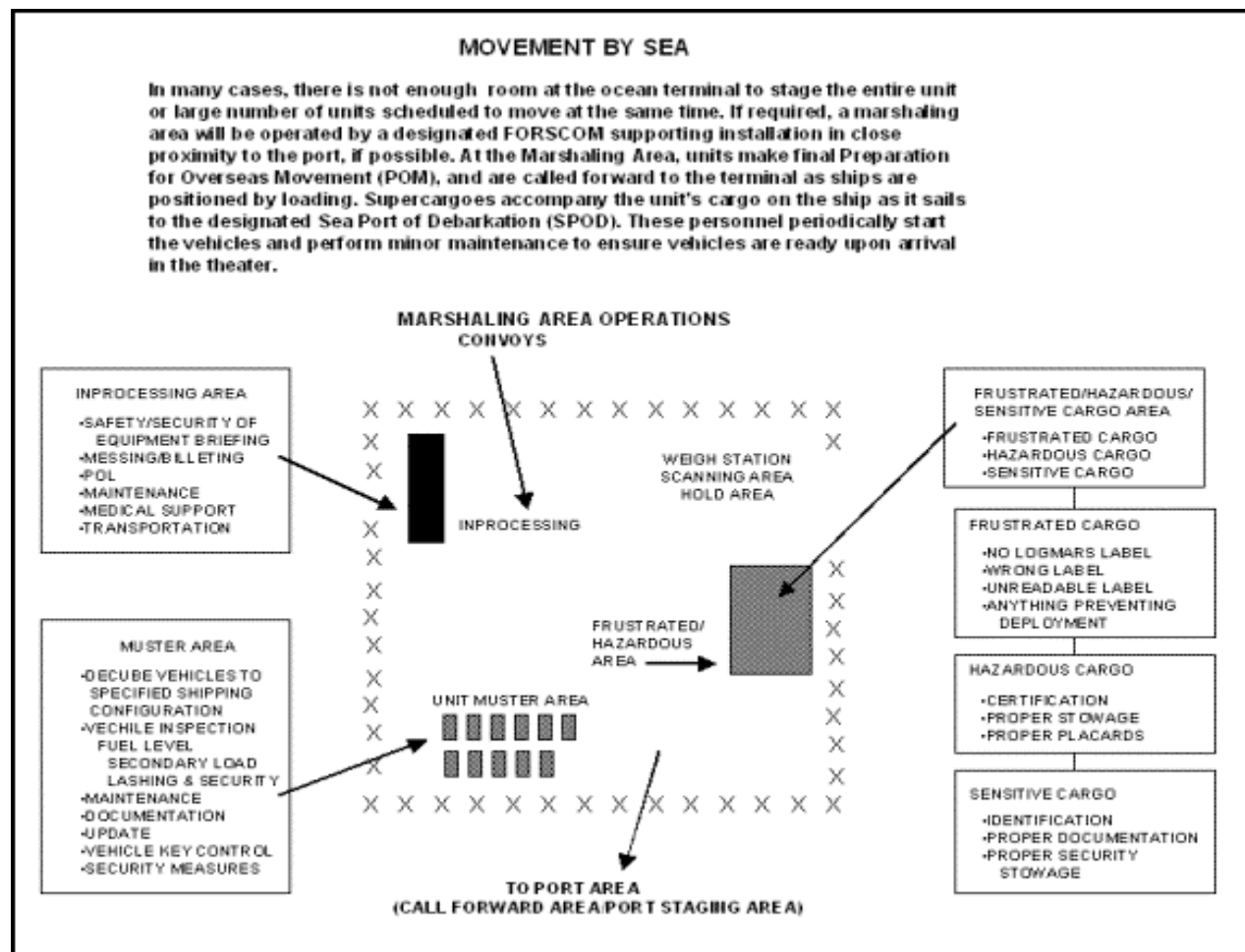


Figure 4-1. Movement by Sea (Marshaling Area)

DEPLOYING UNIT RESPONSIBILITIES IN THE MARSHALING AREA

4-5. A deploying unit moves to the marshaling area in response to MTMC port call messages. Upon arrival in the marshaling area, it begins the coordination, preparation, and checks necessary to ensure that its movement to the staging area and ultimately to the vessel can be accomplished without pause. To this end the unit accomplishes the following:

- Manage the flow of deploying unit personnel as they arrive and depart the marshaling area. Ensure the proper documentation is with all supplies and equipment.
- Account for unit equipment and basic load containers as they enter and leave the marshaling area. Ensure unit equipment is properly labeled and tagged. When equipment or cargo is called forward, move it from the marshaling area to the staging area.
- Check to ensure secondary loads are properly blocked, braced, and secured and check cargo lashings and height limitations of equipment.

- Check to ensure hazardous cargo is properly marked, labeled, and packaged IAW CFR 49 and applicable regulations or directives.
- Perform PMCS on vehicles and unit equipment. Adjust fuel to proper levels in vehicles and equipment being shipped. Inspect and ensure all AIT tags are working. Using TC AIMS II, re-do AIT tags when necessary.
- Ensure equipment and cargo without AIT tags have MSLs and create them when required.

STAGING AREA

4-6. The MTMC port commander has responsibility for the staging area. The staging area is the final location where unit personnel, supplies, and equipment are assembled prior to boarding the vessel. As the vessel readies for loading, the port commander calls forward supplies and equipment from the marshaling area to the staging area based on a call forward plan. The port commander assumes custody and accountability of the equipment and supplies in the staging area. Units usually arrange equipment and supplies in the staging area in the order that it is to move onto the ship.

4-7. Unit movement teams (UMT) transportation terminal brigades (TTBs), port support activities (PSAs), cargo transfer companies, freight consolidation and distribution teams (FCDT), and cargo documentation teams may be assigned to operate staging areas under MTMC control. (The MTMC UMT is an ad hoc organization that opens and temporarily operates a SPOE until the transportation terminal brigade (TTB) is operational. When alerted, a UMT is formed and immediately deploys to the SPOE to coordinate contracts, set up operations, and begin to receive cargo. The team also plans for traffic flow, obtains waivers and clearances, establishes liaison with the deploying unit, develop pre-stow plans, and provides reports. Liaison with the deploying unit is especially critical to establish the flow into the port based on the priority of load. The team's composition is determined by the team chief based on mission requirements. Command authority remains with the team until the TTB commander arrives and assumes command.) (See FM 3-35.4.)

MILITARY TRAFFIC MANAGEMENT COMMAND RESPONSIBILITIES IN THE STAGING AREA

4-8. MTMC is the worldwide common user ocean terminal port operator and is responsible for directing and coordinating the deployment of units through SPOEs according to Time Phased Force Deployment Data (TPFDD). MTMC directs and coordinates this deployment of units through its SPOEs by dispatching port call messages to the affected units. Port call messages provide an earliest and latest unit arrival date at the port complex to facilitate vessel loading (and sailing) to meet TPFDD requirements. These port call messages provide schedules for units to arrive at the port complex in sufficient time for the unit to process through the marshaling area (if there is one) and the staging area on a schedule that permits loading to meet vessel sailing schedules.

4-9. When the unit arrives in the staging area, a MTMC element is there to meet the following responsibilities, many of which are double-checks of actions taken in the marshaling area:

- Operates the staging area to receive, stage, provide safety briefings, and supervise embarkation of unit personnel, supplies, and equipment in the port onto vessels.

- Establishes and directs port communications, safety policies, and physical security procedures for equipment. Within this general category of safety and security; plans and implements procedures for the handling and storage of HAZMAT, controlled, sensitive, and pilferable items. Ensures HAZMAT items are properly marked, labeled, and documented as HAZMAT, verbiage above and staged and stowed IAW CFR 49.
- Ensures secondary loads are properly blocked, braced, and secured and assures cargo lashings and height limitations of equipment are within parameters. Corrects deficiencies not resolved in the marshaling area.
- Regulates military traffic within the port.
- Develops stow plans, supervises vessel loading, inspects vessel readiness, and provides documentation.
- Controls all equipment departing the staging area for vessel loading. Scans or interrogates all unit equipment and sustainment cargo as it arrives and leaves the staging area. As part of this tracking, makes a final check of AIT tags to ensure they are readable and properly affixed. Repairs or replaces any AIT tags or MSLs that are damaged, inaccurate, or missing.
- Uses AIT to capture the movement of unit equipment through the port complex to the vessel final stowage location and sends the data to the GTN. (Scan MSLs and AIT tags and send the data to WPS and then to GTN.)
- Ensures equipment and supplies are properly documented.
- Ensures fuel is adjusted to the proper level in vehicles and other equipment being shipped.
- Provides vehicle operators for all types of equipment to move vehicles in the staging area and assists in loading and unloading the vessels.
- Provides vehicle recovery in the staging area during loading and unloading of vessels.

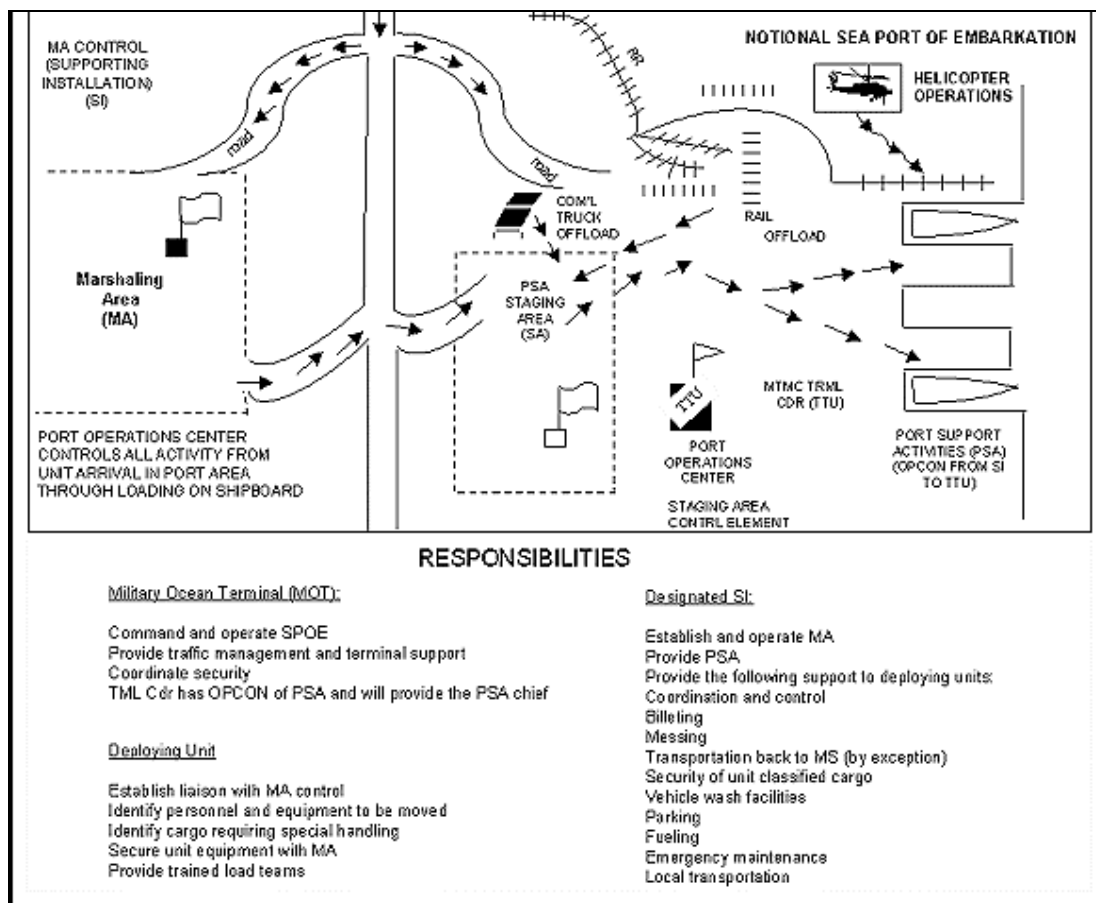


Figure 4-2. Notional SPOE

RESPONSIBILITIES

4-10. In organizing for reception of personnel, equipment, and supplies at its SPOEs, MTMC may be assigned any of the following to assist in the deployment mission: UMT, a TTB, a PSA, cargo transfer companies, FCDTs, and cargo documentation teams.

TRANSPORTATION TERMINAL BRIGADE (TTB)

4-11. TTBs are Reserve Component (RC) units that allow the MTMC to expand the number and capability of seaports. TTBs conduct ocean terminal operations at established ports where existing manpower, equipment, and infrastructure are available. They may be deployed Outside Continental United States (OCONUS) to expand the number and capability of ports for sustainment or redeployment purposes.

4-12. A typical TTB operates two or three berths simultaneously (four or five berths for limited surge periods), provides traffic management, and supervises contracts. It employs Army information systems such as Integrated Computerized Deployment System (ICODES) and Worldwide Port System (WPS), and uses automated identification technology (AIT) to maintain in-transit visibility. (See new FM 3-35.4.)

PORT SUPPORT ACTIVITY (PSA)

4-13. The PSA is a temporary military augmentation organization (or contracted organization) comprised of personnel with specific skills that aid the port commander in receiving, processing, and clearing cargo at the SPOE. It is under the operational control of the port commander. CONUS installations are tasked by FORSCOM to provide PSAs to specific ports. This includes the PSA and associated logistic support for deploying units. The PSA establishes the necessary communications to ensure the proper flow of cargo. It provides daily operational reports of cargo received, maintenance performed, and operational problems to the port commander. In an OCONUS area of operation (AO), the ASG provides the PSA and associated logistic support for deploying units. (See FM 3-35.4.)

CARGO TRANSFER COMPANY (CTC)

4-14. A CTC is organized with four cargo transfer platoons and a documentation section. The four platoons have material handling equipment (MHE) to support transshipping cargo, containers, and unit equipment to ships and aircraft. Each platoon can operate independently at a remote site to support transshipment operations. The company assists in loading ships and operating a staging area. The small CTC Documentation Section, equipped with TC-AIMS II, cannot support each of the four Platoons simultaneously when they operate at remote terminals. When operating remote terminals, the CTC is augmented with one or more cargo documentation teams. (See FM 55-1; new FM 4-01.)

CARGO DOCUMENTATION TEAM (CDT)

4-15. A cargo documentation team is staffed with 88N Documentation Specialists. The cargo documentation team has no MHE. The team is normally assigned to augment a cargo transfer company to prepare documentation for cargo and equipment being loaded on vessels. (See FM 55-1; new FM 4-01.)

FREIGHT CONSOLIDATION AND DISTRIBUTION TEAM (FCDT)

4-16. The FCDT is staffed to operate its forklifts, loading ramps, and a TC-AIMS II computer with AIT devices and printers. The FCDT can be located at small terminals to provide independent loading and documentation services or at larger port complexes as a tailored augmentation to the TTB. The FCDT prepares documentation for cargo and equipment being loaded on vessels. (See FM 55-1; new FM 4-01.)

Section 2 - Aerial

4-17. Battalion and companies deploy personnel, supplies, and equipment by air through an aerial port of embarkation (APOE) that is generally operated by the Air Force. It may be on an Air Force Base or a commercial airfield. All ports must have communications and be able to provide ITV of unit equipment during this phase of movement. This capability must extend to providing advance arrival information to the APOD. There are distinct differences between a SPOE and an APOE. Most notably is that the APOE uses four separate areas of movement preparation. Personnel, supplies, and equipment go from the marshaling area to an alert holding area, to a call forward area, and finally to a loading ramp area. These latter three areas, the alert holding area, call forward area, and loading ramp area, are used at an APOE instead of the single staging area of an SPOE. A notional APOE structure is shown in Figure 4-3.

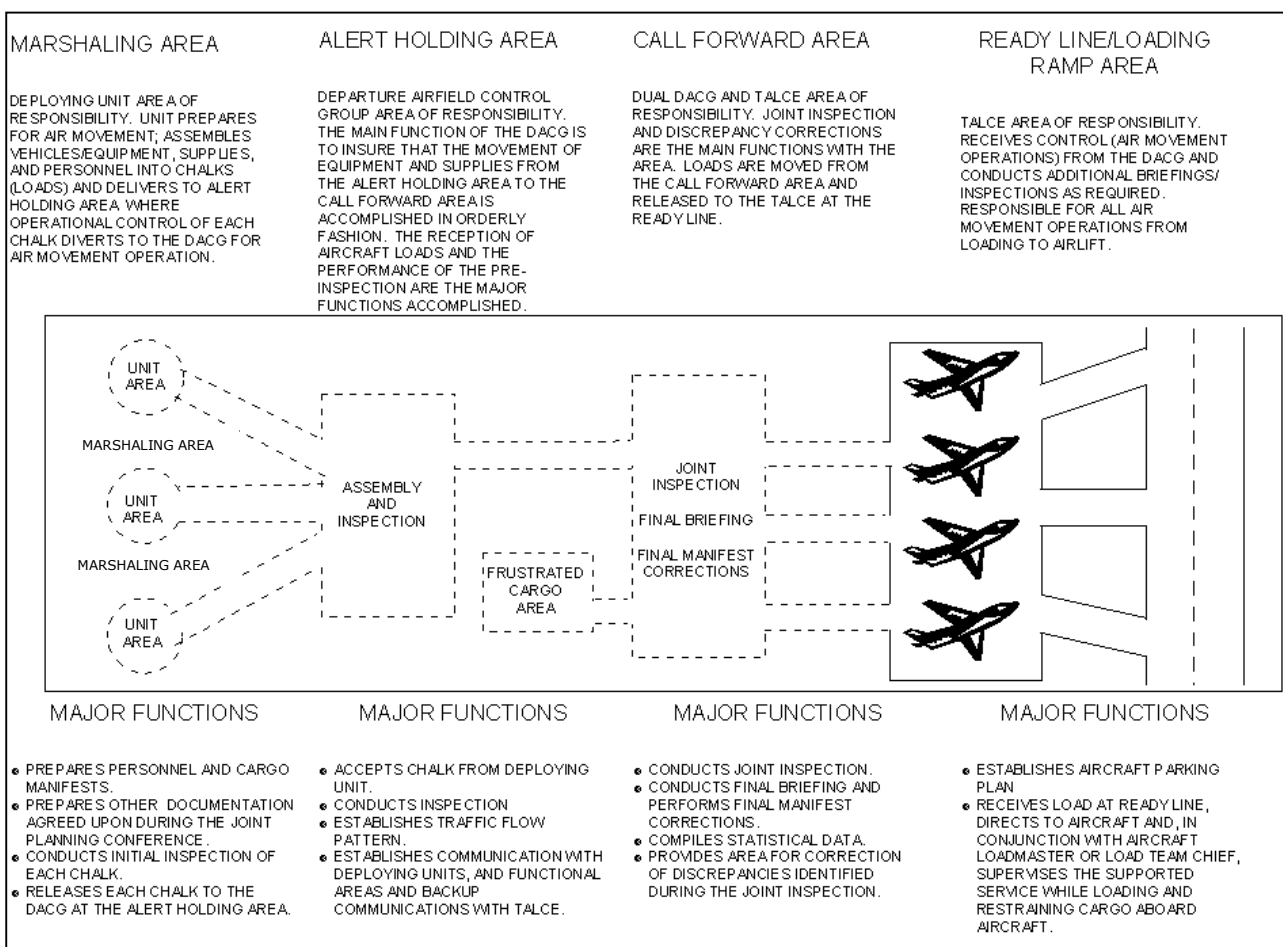


Figure 4-3. Notional Aerial Port of Embarkation.

4-18. The Arrival/Departure Airfield Control Group (A/DACG) is an Army organization established to control and support departure preparation and facilitate Army deployments at the APOE. The A/DACG is normally run by a CTC or can be an ad hoc organization provided by an Army organization (installation, ASG, etc.) tasked to support the deploying forces and the APOE

with the A/DACG mission. Its size and capabilities are mission dependent. The A/DACG is task organized with personnel and equipment not associated with the deploying units. Cargo transfer companies are well-suited to perform this mission. Its organizational structure provides, as a minimum, command, administration, operations, joint inspection, and loading/unloading capabilities.

4-19. The aerial port complex is under the control of a Tanker Airlift Control Element (TALCE). The TALCE is a deployed Air Mobility Command organization established at fixed, en route, and deployed locations where AMC operational support is non-existent or insufficient. A TALCE is composed of mission support elements from various units and deploys in support of contingency/emergency relief operations on both a planned and "no-notice" basis. The TALCE provides continuing on-site management of Air Mobility Command airfield operations including command and control, communications, aerial port services, maintenance, security, weather, and intelligence -- those critical elements needed to ensure a safe and efficient air base for airlift operations.

4-20. The four distinct port complex areas are:

- The **Marshaling Area** activities are the responsibility of the deploying commander. . It is the area where units start, continue, or complete preparation for loading. (The deploying unit should not be required to perform support functions, thus permitting its concentration on preparation for the deployment.) the marshaling area is normally located at or in the vicinity of the airfield, but may be located in any location to ease movement and control. in any case, the marshaling area activities should take place as close as possible to the departure airfield. Its location should not cause unnecessary congestion to airfield operations or undue hardship to the deploying unit.
- The **Alert Holding Area** is the equipment, vehicle, and passenger control area, and is the responsibility of the A/DACG. It is normally located in the vicinity of the departure airfield. It is used to assemble, inspect, hold, and service aircraft loads. Control of the load is transferred from the individual unit to the A/DACG at this point.
- The **Call Forward Area** is that portion of the departure airfield where the joint inspection is conducted. (See Figure 4-3.) It is the dual responsibility of the A/DACG and the TALCE. A final briefing is provided to deploying troops and all manifests are reviewed for accuracy. The deploying unit corrects all discrepancies found by the A/DACG and TALCE joint inspection. Control of the load moves from the A/DACG to the TALCE when the load moves from the call forward area to the loading ramp.
- The **Loading Ramp Area** is that portion of the departure airfield beyond which aircraft operations are conducted. It is the responsibility of the TALCE who receives sole control of the load from the A/DACG when the load or "chalk" moves from the call forward area to the loading ramp area. Additional briefings and inspections may be conducted in this area. Here the aircraft parking plan is executed and loads directed to the parked aircraft. Actual loading of the aircraft is accomplished in this area under the supervision of loadmasters or load team chiefs.

4-21. Each of these areas is discussed in the paragraphs that follow.

MARSHALING AREA

4-22 The primary purpose of a marshaling area is to provide a location near the port complex to assemble personnel, unit supplies, and equipment and make final preparations for air shipment before entering the alert holding area. Unit marshaling areas are used to receive convoys and process

vehicles before they are staged for loading. Support installations, area support groups, or other organizations can be tasked to establish a marshaling area. Here unit equipment is configured for movement prior to entering the alert holding area. The deploying commander accomplishes the following actions in the marshaling area:

- Manage the flow of deploying personnel and account for unit equipment, basic load containers, and pre-configured deployment pallets as they arrive and depart the marshaling area. When personnel, equipment, or supplies are called forward, move them from the marshaling area to the alert holding area.
- Coordinate with the A/DACG on when to move personnel, equipment, and cargo to the alert holding area.
- Prepare personnel and cargo manifest. Ensure unit aircraft load arrives and that control of it passes at the alert holding area at the time specified by the A/DACG.
- Ensure the appointed chalk commanders, sometimes called “aircraft commanders” (don’t confuse this with the pilot-in-command) are briefed on their responsibilities. (A “chalk” is composed of designated troops, equipment, supplies, and other cargo that constitute a complete aircraft load.
- Arrange with the TALCE for Air Force technical assistance.
- Perform PMCS steam cleaning of vehicles and unit equipment. Adjust fuel to proper levels in vehicles and equipment being shipped. Ensure all AIT tags are working. Create AIT tags when necessary.
- Ensure equipment and cargo without AIT tags have MSLs and create them when required.
- Check to ensure secondary loads are properly blocked, braced, and secured and check cargo lashings and height limitations of equipment and center of balance (CB) is properly marked.
- Check to ensure hazardous cargo is properly marked, labeled, and loaded IAW CFR 49 verbiage above.

ALERT HOLDING AREA

4-23. The alert holding area is the equipment, vehicle, and passenger control area. It is normally located in the vicinity of the departure airfield. It is used to assemble, inspect, hold, and service aircraft loads. Control of the load is transferred from the individual unit to the A/DACG at this point. The following activities take place in the alert holding area:

- Establish communications with the units in the marshaling areas and the TALCE in the call forward area.
- Receive passenger and/or cargo manifests, load plans and required documentation from the deploying unit and inspect for accuracy and completeness.

- Conduct a pre-inspection of the cargo and equipment to be loaded on the aircraft and have the unit correct any load discrepancies identified
- Receive, inventory, and control aircraft loads as they arrive at the alert holding area and leave for the call forward area.
- Inspect aircraft loads to ensure that they are complete and correctly prepared. Ensure deploying unit has required shoring, floor protection materials, and 463L dunnage on hand.
- Verify accuracy of weight and CB markings.
- Ensure that the unit provides emergency maintenance; petroleum, oil, and lubrication (POL); and related services, as needed, to accomplish the outloading mission.
- Move, direct, and guide aircraft loads to the call forward area.
- Ensure that loads are sent to the call forward area at the time agreed upon by the deploying unit and TALCE.

CALL FORWARD AREA

4-24. The call forward area is that portion of the departure airfield where the A/DACG and TALCE conduct joint inspections of aircraft loads. A final briefing is provided to deploying troops by the TALCE. The A/DACG and TALCE review all load plans and manifests for accuracy. The deploying unit corrects all discrepancies found by the joint inspection in the call forward area.

4-25. In the call forward area, the A/DACG is responsible to:

- Assist the TALCE in the joint inspection of aircraft loads and manifests and ensure that discrepancies found during the joint inspection are corrected.
- Move equipment forward to the loading ramp area and segregate by load after they pass inspection.
- Reassemble aircraft loads in the event of an aircraft abort (or air cargo load discrepancy) and with the assistance of the TALCE, prepare required manifest changes.
- Maintain statistical data to account for the current status of all unit personnel and equipment scheduled for air movement.
- Ensure the deploying unit adheres to the established movement timetable.
- Provide and equip loading team personnel and provide support equipment.
- Escort aircraft loads to the ready line.
- Ensure that all personnel are briefed by the TALCE.

- Retain a final corrected copy of each passenger and cargo manifest, inspection record, and load plan.
- Provide fueling and defueling capability and emergency maintenance for equipment to be transported.
- Provide passenger-holding areas.

4-26. In the call forward area, the TALCE is responsible to:

- Coordinate with the A/DACG on all changes required to the aircraft configuration.
- Conduct the joint inspection with the A/DACG.
- Assist the A/DACG in reassembling aircraft loads in the event an aircraft aborts or discrepancies are discovered in the planned air cargo load.
- Provide passenger briefing guide for the passengers' representative to brief the troops for on/off load procedures. Brief vehicle drivers and passengers on flight line safety, driving procedures, smoking rules, and special precautions.
- Provide a team chief for each loading team.
- Provide passenger escort to the aircraft.
- Notify the A/DACG when loads are to be dispatched to the loading ramp area ready line.
- Move cargo to the ramp area ready line.
- Accept loads at the ready line and load aboard the aircraft.

LOADING RAMP AREA

4-27. The loading ramp area, including ready line, is controlled by the TALCE. Additional briefings and instructions may be conducted in this area. Under supervision of the aircraft loadmaster or load team chief, the supported service loads and restrains cargo aboard the aircraft.

4-28. The chalk commander is responsible for:

- Following directions of load team chief or passenger escort.
- Monitoring and controlling aircraft passengers.
- Retaining one copy of the final passenger/cargo manifest.
- Providing assistance in loading and securing the aircraft load as requested by the loadmaster or load team chief.
- Ensuring that vehicle drivers and equipment operators follow the instructions of the load team chief or loadmaster while loading equipment on the aircraft.

4-29. The A/DACG is responsible for:

- Transferring control of the aircraft load to the TALCE at the ready line and monitoring the loading.
- Providing load teams to assist in loading and securing the aircraft load as required by the loadmaster or load team chief.
- Maintaining coordination with the deploying unit representative and TALCE.
- Obtaining individual aircraft load completion time from TALCE.

4-30. The TALCE is responsible for:

- Accepting planeloads from the A/DACG at the ready line.
- Ensuring that all drivers have been briefed on flight line safety.
- Ensuring that each aircraft load is positioned at the proper aircraft at the specified time.
- Maintaining liaison with the aircraft crew and the A/DACG.
- Coordinating with the aircraft primary loadmaster and ensuring that loads are placed aboard the aircraft in time to meet the scheduled departure time.
- Providing (if required) and operating MHE and special loading equipment according to DTR 4500.9R and agreements during joint planning.
- Maintaining communications with the A/DACG and deploying units.
- Providing aircraft loadmaster with required copies of the passenger/cargo manifests and air load plans.
- Briefing aircrews, as required.

4-31. The load team chief is responsible for:

- Receiving loads at the ready line.
- Directing and supervising the loading teams and vehicle drivers.
- Coordinating with the aircraft primary loadmaster, directing all loading operations, and ensuring all equipment and supplies are properly restrained in the aircraft.
- Coordinating with the TALCE ready line coordinator for any special assistance or equipment needed.

- Collecting required copies of the passenger/cargo manifest and making sure that they are given to the aircraft primary loadmaster.
- Passing load completion time to the TALCE.

Chapter 5

Operations at the Port of Debarkation (POD)

The weakest segment is in the theater of operations. Specifically, the hand-off of personnel, equipment and materiel from USTRANSCOM to the CINC at the ports of debarkation appears to be the "critical seam" where disruption of the deployment flow is most likely to occur.

Report of the Defense Science Board Task Force on Strategic Mobility
August 1996

OVERVIEW

5-1. When serving as a UMO or in any leadership or technical capacity in the movement process, unit commanders rely heavily on unit movement experts during the arrival/reception phase of a unit's move into a exercise location, operation area or theater of operations. This chapter gives a broad overview of the reception, staging, onward movement and integration (RSO&I) process associated with deployments, with focus on movement activities and responsibilities during the reception and staging phases that take place at sea or aerial ports of debarkation. Additionally, this chapter addresses movement activities that take place at a motor transport or rail arrival terminal.

Section 1: RSO&I Overview

5-2. This chapter deals with reception and onward movement of units arriving in an area of operations and delineates responsibilities. Reception is a command responsibility. The senior Army logistics command in theater, normally a theater support command or an augmented corps support command, is responsible for the health, welfare, and life support of arriving forces and for assisting with their onward movement. Onward movement is coordinated by movement control units to ensure a smooth flow of personnel, equipment, and supplies through the PODs and inland lines of communication. Transfer of data from United States Transportation Command (USTRANSCOM) through Global Transportation Network (GTN) and Total Asset Visibility (TAV) programs to the gaining command is essential to plan for reception and onward movement. (See figure 5-1 that depicts the reception process.)

5-3. Reception and onward movement within the theater of operations require extensive coordination between transportation managers and the arriving unit commanders and staffs. TC-AIMS II assists both of these elements to accomplish this needed coordination.

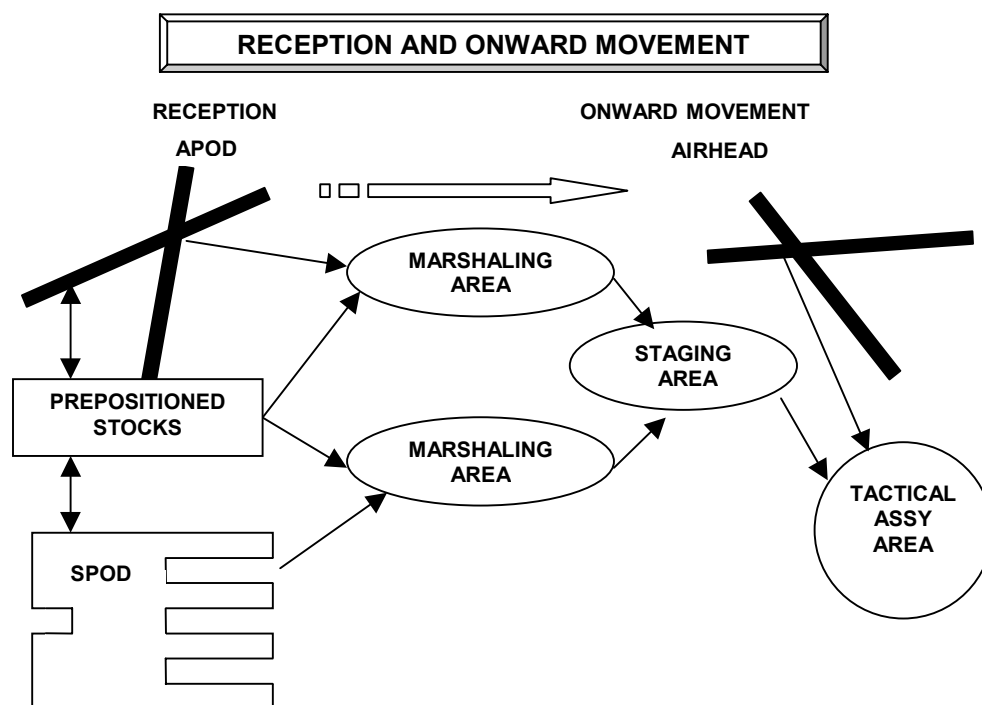


Figure 5-1. Reception Process

5-4. The senior theater movement control element (MCE) serves the primary role in managing the reception, staging, and onward movement operations in the theater. The MCE is responsible for movement of unit equipment and personnel arriving at seaports and airfields and their movement forward through marshaling areas and intermediate staging areas to their tactical assembly areas (TAA).

5-5. The port of debarkation (POD) is the normal transfer point of command authority to the supported theater commander. The responsibility of moving the unit and maintaining intransit visibility (ITV) shifts from USTRANSCOM to the senior theater MCE, which continues movement control of the unit to its final prescribed location in the theater.

5-6. Theater reception begins with the arrival of forces and their sustainment at the POD. The primary challenge of this process is port clearance. Except in the case of forcible entry, port-opening forces should precede the arrival of combat forces. Other combat support (CS) and combat service support (CSS) forces may either precede or arrive concurrently with combat forces to conduct force reception and onward movement operations, establish theater distribution infrastructure, or to conduct security operations.

5-7. Transportation request procedures are required for the orderly and expeditious onward movement of unit equipment and supplies. The same principles for onward movement from the POD apply for both aerial and sea ports.

NOTE: The supporting movement control team (MCT) using TC-AIMS II, plans for onward movement in coordination with the unit. The supporting MCT provides guidance and movement instructions to units to ensure that vehicles that move by rail or air are only reconfigured or fueled as required or authorized by the mode operator.

Section 2: Seaport

UNIT RECEPTION AT THE SEAPORT OF DEBARKATION (SPOD)

5-8. An SPOD is a port designated by the theater commander in coordination with USTRANSCOM. When vessels arrive at the SPOD, the port commander is responsible for discharging the unit equipment, staging the equipment, maintaining control and ITV, and releasing it to the unit. The port commander remains responsible for unit equipment and supplies until they reach the staging area where arriving units assume responsibility for their supplies and equipment. The port MCT coordinate, plan, control, and manage the processing of the units' equipment for onward movement. Their actions are based on advanced manifests received via Worldwide Port System (WPS), available transportation, theater priorities, tactical situation, and throughput capacity. See figure 5-2 for a notional SPOD.

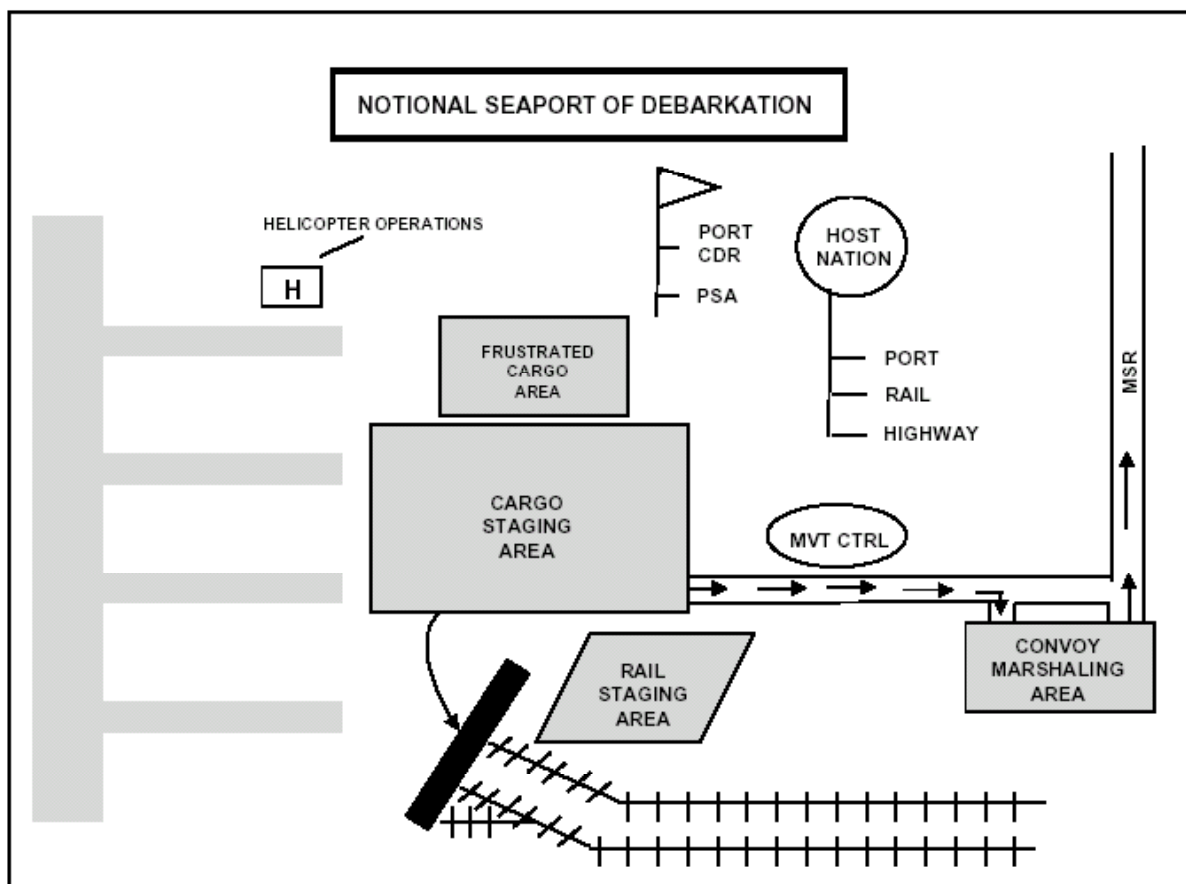


Figure 5-2. Notional Seaport of Embarkation

STAGING AREA

5-9. As the vessel readies for off-loading, the Military Traffic Management Command (MTMC) port commander establishes a staging area for the transshipment and accounting of equipment. The port commander determines discharge priorities based on the supported combatant commander's guidance and assigns missions to terminal service units that discharge vessels. The port commander assumes custody of the cargo from the vessel master upon discharge. Equipment offloaded is then staged by support elements based on theater onward movement requirements. Transportation terminal brigades (ITB), PSAs, cargo transfer companies, and cargo documentation teams may be assigned to operate staging areas under MTMC control. As unit personnel arrive in the theater, support units transport them to the staging area to assume custody of their equipment. Units assemble their equipment and supplies, assume custody, and move it to the marshaling area outside the terminal.

Military Traffic Management Command Responsibilities in the Staging Area

5-10. When unit personnel, equipment, and supplies arrive in the staging area, a MTMC element is there to meet the following responsibilities:

- Supervise discharge of unit personnel, supplies, and equipment from vessels.
- Operates the staging area to receive and control all equipment departing the vessel.
- Ensures equipment and supplies are properly documented.
- Transfer custody of equipment and cargo to arriving units in the staging area.
- Establishes and directs port communications.
- Establishes and directs safety policies, and physical security procedures for sensitive (protected) and classified items. Within this general category of safety and security, plans and implements procedures for the safe handling and storage of hazardous material (HAZMAT); and controlled, sensitive, and pilferable items. Provides safety briefings. Ensures that HAZMAT items are properly labeled and documented as HAZMAT, and staged and stowed IAW CFR 49 and other prescribed regulations.
- Regulates military traffic within the port.
- Scans or interrogates all unit equipment and sustainment cargo as it leaves the vessel. Incident to this tracking, makes a final check of automatic identification technology (AIT) tags to ensure they are readable and properly affixed. Repairs or replaces any AIT tags or military shipping labels (MSL) that are damaged, inaccurate, or missing. Sends the data to the GTN. (MSLs and AIT tags are scanned and the data sent to WPS then passed to GTN.)
- Provides vehicle operators for all types of equipment to move vehicles from the vessels to the staging area and otherwise assist unloading the vessels.
- Provides vehicle recovery area during unloading of vessels.
- Perform liaison with arriving units.

Unit Responsibilities in the Staging Area

5-11. Generally, arriving units are recipients of support in the staging area. Unit responsibilities in this area are very basic. Staging area responsibilities of units are shown below.

- Assume custody of equipment and supplies from the port commander.

- Assemble equipment and supplies for movement to the marshaling area.
- Move equipment and supplies to the marshaling area outside the terminal.

NOTE: If marshaling areas are not available, as may be the case OCONUS, units should be prepared to move directly to their tactical assembly area (TAA) or to an Army prepositioned stock (APS) site to draw equipment from the staging area. When this is necessary, marshaling area functions have to be performed in the staging area. Marshaling areas are virtually always available in CONUS.

MARSHALING AREA

5-12. Prompt clearance of cargo from the terminal is essential to the efficiency and success of the total theater logistics system. It is also necessary to avoid serious congestion in the terminal staging area. To clear the port efficiently, marshaling areas are established. The marshaling area is a location next to the port where units their equipment and supplies to assemble, reconfigure them, and prepare for onward movement.

Support Element or Other Tasked Unit Responsibilities in the Marshaling Area

5-13. In order to clear the port area quickly to maintain an efficient flow and avoid congestion, the port commander ICW the receiving command establishes support elements in the marshaling areas. These are elements from units tasked to provide the support and frequently come from the area support group (ASG) OCONUS. In CONUS, they are provided by installations or other organizations tasked by the receiving command. Regardless of their source, support element responsibilities and functions that can be expected in the marshaling area are shown below.

- Maintain a central control and inspection point.
- Provide a security area for sensitive items.
- Provide life support facilities.
- Create a traffic circulation plan showing movement flow into the marshaling area and from the staging area.
- Provide for maintenance and fuel area for vehicles and equipment.
- Assist units in unpacking containers and repacking cargo as secondary loads.
- Use TC-AIMS II to consolidate movement requirements and submit movement taskings.
- Provide emergency supplies and equipment for isolating and disposing of HAZMAT spills.
- Scan cargo and equipment and it enters and leaves the marshaling area and using TC-AIMS II provide the information to the local ITV server which will provide it to GTN.

NOTE: If there is no MCT or ITO element in the marshaling area, the port transportation officer must provide the movement coordination support.

Unit Responsibilities in the Marshaling Area

5-14. While arriving units are recipients of support in the staging area, they assume custody and responsibility for equipment and supplies there and move to the marshaling area. Unit responsibilities in the marshaling area are the usual responsibilities for its equipment and supplies. Marshaling area responsibilities of units are shown below.

- Ensure all personnel, cargo, and equipment is accounted for.
- Conduct necessary maintenance and reconfigure equipment for onward movement.
- Fuel equipment for onward movement.
- Unpack containers and repack cargo as secondary loads.
- Reconfigure secondary loads as necessary for onward movement.
- Ensure HAZMAT is correctly packed and segregated for onward movement.
- Provide security for sensitive items.
- Provide movement requests to the supporting ITO or MCT using TC-AIMS II.
- Prepare to conduct operations (OCONUS).

General: The arrival/unloading processes that occur at a motor transport or rail intra-theater terminal are similar to those that take place at a SPOD. Though there is more flexibility with motor transportation, both motor transport and rail arrival terminals have a similar organization to their terminal operations to include staging and marshaling areas. A UMO should not have trouble operating at a motor transport or rail terminal if he knows his responsibilities, what external support is required, and what MTMC's responsibilities are during arrival/unloading terminal operations.

Section 3: Aerial Port

UNIT RECEPTION AT THE AERIAL PORT OF DEBARKATION (APOD)

5-15. An APOD is an airfield that has been designated for the sustained air movement of personnel and materiel, to serve as an authorized port for entrance into or departure from the country in which it is located. It is designated an APOD by the supported combatant commander in coordination with USTRANSCOM. Reception at the APOD is coordinated by the senior logistics commander and executed by (an Air Force) tanker airlift control element (TALCE), a port movement control team (port MCT), an arrival/departure airfield control group (A/DACG), or both, depending upon the magnitude of the operations. The port MCT and/or A/DACG must be in the lead elements of the transported force. Augmentation with cargo transfer companies, cargo documentation teams, theater support contractor, and host nation support (HNS) is desired to rapidly clear the port. The port MCT has the mission of coordinating transport services for the APOD and ensuring quick clearance of cargo movements into and out of the APOD. Both Air Force and Army have responsibilities at an APOD. Their locations are reflected in figure 5-3.

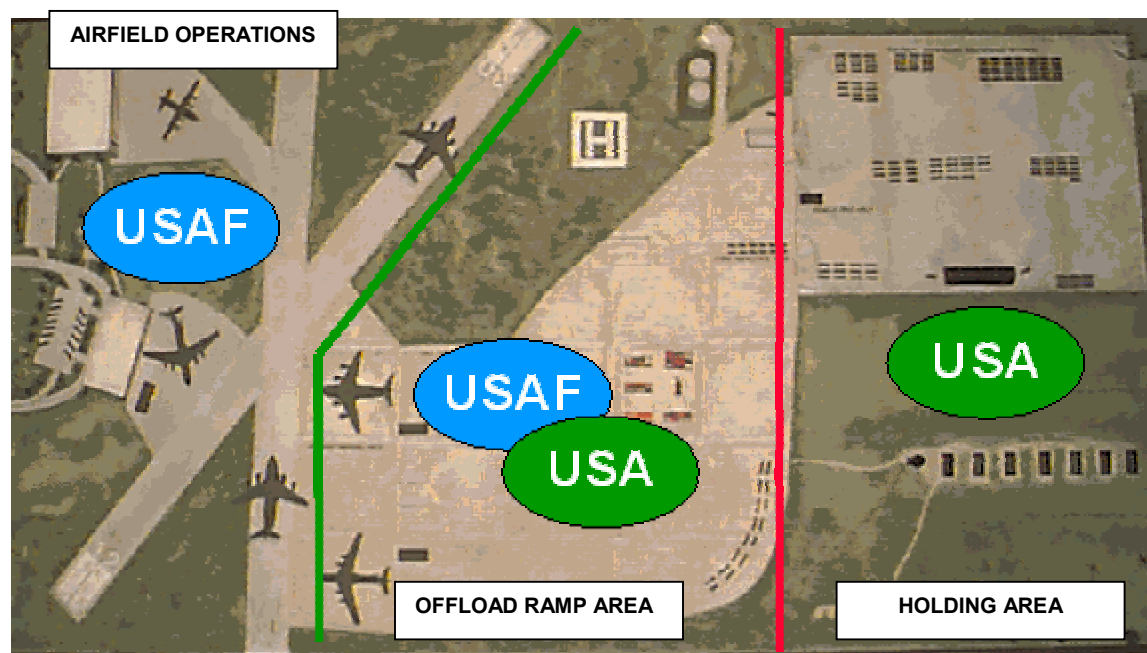


Figure 5-3. APOD Responsibilities at a Notional APOD.

5-16. The main areas of the APOD are the off-load ramp, the holding area, and the unit marshaling area (see Figure 5-3). The TALCE supervises off-loading arriving aircraft. The A/DACG escorts loads to the holding area and assists the unit in assembling and moving to the marshaling area.

OFF-LOAD RAMP AREA

5-17. The TALCE controls the off-load ramp area activities. The off-load ramp area is where the aircraft are off-loaded. Each load is released to the A/DACG for return to unit control at the holding area.

TALCE Responsibilities in the Off-Load Ramp Area

5-18. The TALCE is the Air Force authority that operates the airfield and supervises the off-load ramp area. Some responsibilities and functions of the TALCE are to:

- Advise the A/DACG of the airflow and expected arrival of aircraft.
- Plan and supervise aircraft parking.
- Receive passenger and cargo manifests from the aircraft loadmaster.
- Supervise off-loading the aircraft, including removal of shoring and dunnage.
- Provide all MHE and special off-loading equipment including operators.
- Provide ITV using AIT to scan cargo and equipment as it comes off aircraft and use Global Air Transportation Execution System (GATES) to transmit the data to GTN.

A/DACG Responsibilities In The Off-Load Ramp Area

5-19. The A/DACG supports the TALCE in the off-load ramp area. Its mission is airfield clearance operations. Some responsibilities and functions the A/DACG are to:

- Maintain coordination with the arriving unit and TALCE representatives.
- Coordinate for a detail from the arriving unit.
- Provide off-load teams and support equipment to the TALCE as required.
- Accept each planeload from the TALCE at the established release point.
- Ensure that shoring and dunnage from the aircraft is removed and transferred to the arriving unit.

Unit Responsibilities in the Off-Load Ramp Area

5-20. Unit responsibilities in the off-load ramp area are:

- Provide assistance to the loadmaster.
- Comply with instructions from the off-load team chief when unlash and off-loading the aircraft.
- Ensure that all aircraft tie-down equipment is returned to the TALCE.
- Retain all shoring and dunnage for further use.
- Provide passenger and cargo manifests to the A/DACG.

HOLDING AREA

A/DACG Responsibilities in the Holding Area

5-21. Arriving units are responsible for providing unit liaison personnel to the A/DACG and for assisting the A/DACG as required. The A/DACG will perform the following:

- Coordinate with the TALCE and arriving units.
- Provide support to arriving units as determined during the joint planning conference.
- Use AIT to scan unit equipment and cargo and use TC-AIMS II to report the information to the regional ITV server.
- Release aircraft loads to the arriving unit commanders or their representatives at a predesignated location.
- Coordinate MHE and transport of the movement of aircraft pallets to the unit marshaling area for pallet breakdown.
- Provide fuel, oil, and minor maintenance for transported vehicles.
- Provide emergency services to accomplish the mission.

Unit Responsibilities in the Holding Area

5-22. In the holding area, arriving units locate their equipment, prepare it for movement to the marshaling area, and generally begin the process of “marrying-up” with organic supplies and equipment. Arriving units perform the following:

- Provide unit liaison personnel to the A/DACG.
- Assist the A/DACG as required.
- Assume custody of equipment and supplies.
- Move equipment and supplies to the marshaling area outside the terminal.

NOTE: If marshaling areas are not available, units should be prepared to move directly from the holding area to their TAAs, to an APS site to draw equipment, or to the SPOD to receive unit equipment off-loaded from vessels. When this is necessary, marshaling area functions are performed in the staging areas.

MARSHALING AREA

5-23. The marshaling area is a location next to the port where units reconfigure their equipment and prepare for onward movement. Prompt clearance of cargo from the APOD is essential to the efficiency and success of the total theater logistics system. It is also necessary to avoid serious congestion in the port holding area.

ASG or Other Tasked Unit Responsibilities in the Marshaling Area

5-24. Planning must focus on moving units through the APODs quickly. Marshaling areas are established to allow rapid clearing of the APODs, and to allow units to complete the process of restoring their equipment and supplies from shipment configuration to operational configuration, and get ready for onward movement. Moving these activities to the marshaling areas reduces port congestion, thus reducing the potential for work slowdown or stoppages during off-load operations.

5-25. The support unit in the marshaling will:

- Maintain a central control and inspection point.
- Provide a security area for sensitive items.
- Provide life support facilities.
- Create a traffic circulation plan showing movement flow into the marshaling area and from the staging area.
- Provide maintenance and fuel for vehicles and equipment.
- Use TC-AIMS II to consolidate movement requirements and submit movement taskings.
- Provide emergency supplies and equipment for isolating and disposing of HAZMAT spills.
- Scan cargo and equipment as it enters and leaves the marshaling area and using TC-AIMS II provide the information to the local ITV server which will provide it to GTN.
- Use TC-AIMS II to obtain convoy clearances and special hauling permits for arriving units.
- Use TC-AIMS II to arrange for movement of cargo and equipment beyond the requesting units' organic capabilities.
- Provide technical assistance to units on loading commercial assets and railcars.

NOTE: The unit assigned to run the marshaling area might include an MCT. If not, the port MCT provides MCT functions.

Unit Responsibilities in the Marshaling Area

5-26. Marshaling areas are established to allow units to complete the process of restoring their equipment and supplies from shipment configuration to operational configuration, as well as to clear the port area. The marshaling area is where the unit prepares for onward movement. In this area the unit is responsible to:

- Breakdown pallets.
- Ensure that all aircraft pallets and nets are returned to the TALCE or A/DACG.
- Perform required maintenance checks and refuel equipment.
- Configure secondary loads for onward movement.
- Use TC-AIMS II to plan convoys.
- Mark convoy vehicles properly.
- Use TC-AIMS II to create requests for convoy clearance and special hauling permits.
- Use TC-AIMS II to create support requests.

Appendix A

RAIL LOAD TEAM SAFETY BRIEFING, RAILGUARDS AND SUPERCARGOES

Section 1 — Rail Load Team Safety Briefing

A-1. Rail loading and unloading operations must be conducted carefully to prevent personnel injuries and loss of equipment. The following items must be strictly adhered to by everyone in the operation, particularly the officer in charge/non-commissioned officer in charge (OIC/NCOIC).

SAFETY GUIDELINES AND BRIEFING ITEMS

A-2. It is recommended that the following guidelines and items be used as the basis for the operation's safety briefing.

- No loading will begin until all participants have received a full safety briefing from the OIC/NCOIC (or designee).
- OIC/NCOIC will conduct a risk assessment before operations.
- Display a blue flag on the track (***Blue Flag Track Procedure*** – see following Note) behind the last car being loaded so the other trains will not approach the train being loaded.
- Uniform hand signals must be established for use by Car Guides, ensuring that all drivers are fully aware of those signals.
- All loading personnel **MUST** wear leather gloves (not cloth gloves or military black glove “liners” or inserts) and will wear hard hats or helmets. Eye protection (goggles) is highly recommended, but is optional depending on availability. Goggles are always required when driving nails into blocking material.
- Personnel will not jump onto or from railcars. Use the steps provided or walk on/off the railcar using an adjacent railcar or loading dock.
- Do not crawl under any railcar.
- Do not step between railcars.
- Do not step onto a coupler, the coupler assembly, or its hoses.
- Do not step or walk on the rails. They become very slippery if any lubricant has been spilled upon them or when wet.
- Do not stand or walk between a moving vehicle and a parked vehicle on the railcars or in the loading area. Ensure the vehicles engines are off and hand brakes set before you begin securing vehicles to railcars.
- Chock both ends of two wheels (at least one on each side) of the first railcar, then at least one wheel per side on every third railcar thereafter. You may use 2 X 2's or 2 X 4's as chocking material. (Some vehicles come equipped with their own chocks, which should be used.)
- No vehicle will be moved while on a railcar or onto a railcar without a car guide to the front of that vehicle and two side guides (one on the ground on each side of the vehicle being moved). Only the car guide may give instructions to the vehicle driver, but the side guides will keep the car guide advised of the location of the vehicle in relation to the edges of the railcar.
- The car guide should stay one railcar ahead of the vehicle being guided. That will require that the car guide direct the vehicle to the spanners leading onto the railcar on which he is standing, stop

- the vehicle, turn around and walk the full length of that railcar and onto the next in line, then turn around and guide the vehicle across the spanners onto the railcar which he just left. When the car guide is guiding a vehicle onto a railcar where there is already a parked vehicle, he will assume a secure and observable position on or beside the parked vehicle so that he cannot be pinned between the moving and parked vehicles.
- Personnel will not walk backwards on any railcar. Do not walk backwards anywhere in the area of the loading due to the likelihood of obstacles or debris on the ground in that area.
 - Do not wear rings while rail loading. Also, the wearing of watches with military or other fabric around-the-wrist bands should not be allowed, as the band may become hooked on a moving object, dragging the wearer by the tough fabric.
 - Do not pull nails from a railcar deck without proper equipment. Large nails should only be removed by using a long prybar (such as a “gooseneck” wrecking bar) with a nail “notch” due to the size and length of the nails used in the railcars.
 - When using a long prybar around other loading personnel, either pad the end of the prybar or cover its end with one hand to avoid striking or jabbing other personnel with the prybar.
 - On wooden deck flatcars, splintered wood can be very hazardous, and should be avoided (or removed, if possible).
 - There is NO SMOKING in the loading area.
 - The OIC/NCOIC ensures that water and first aid kits are readily available at the site. Medical personnel and a medical evacuation vehicle must be on hand.
 - If loading is to be conducted during hours of darkness, adequate lighting (not unit equipment that is to be loaded) should be made available. Personnel in the loading area must have reflector vests and flashlights. Lighting should be located at deck-level, to avoid placing the work areas under the vehicles in shadow.
 - Car guides must ensure that vehicles are not driven onto spanners until it is verified that the spanners are properly aligned, set, and secured.
 - Do not back any vehicles while on railcars or onto railcars.
 - If the unit will be using bi-level or tri-level cars, load team personnel must be very careful when moving around the ends of the cars, since they are open and a soldier could easily fall to the ground or onto the coupling from them.
 - All rail load personnel must be alert for any unsafe actions or situations, and all personnel have the responsibility and ability to immediately halt all operations if an unsafe situation or action is observed. The OIC/NCOIC will then ensure that the unsafe situation or action is corrected prior to the resumption of operations.
 - Use only authorized and approved tools. Use them only for the purpose for which they were designed.

NOTE: In a **Blue Flag Track Procedure**, a blue flag signal is displayed while working on or loading a train on a track. The Blue Flag Track signal is displayed to signify that workman are on, under, or between rolling equipment and that the equipment must not be coupled to or moved, or in some states, approached by other rolling stock. The **Blue Flag Track Procedure** is United States law (Title 49 CFR 218 Railroad Operating Practices). When operating outside the United States, the laws of other countries prevail and should be followed. In the absence of an equivalent procedure, the Blue Flag Procedure should be used.

Section 2 – Railguards

A-3. Cargo guards or escorts maintain surveillance over the military equipment during the journey and notify railroad personnel of any problems. The rail cargo escorts help railroad personnel protect and maintain security of Army equipment loaded aboard trains and protect US Army interests. When OCONUS, HN support is used when appropriate. A copy of the trip itinerary is given to the cargo escort supervisor. It includes the rail routing by specific rail companies, interchange points, and stop off points within a given rail line. The escorts are given portable radios to maintain communication with escort supervisors and other escorts. Escorts are instructed on locomotive and railroad safety. Additionally, escorts will be briefed on rules of engagement (ROE) prior to the train leaving station.

NOTE: The deploying unit commander makes the final determination based on security requirements and coordinates with the Installation Transportation Officer (ITO) in CONUS or the UMC at the MCT in OCONUS and authorized railroad representatives on guard/escort matters. Guards/escorts are armed at the installation commander's discretion. When armed guards are used, all participating railroads must be notified. All armed guards must be familiar with the rules of engagement and trained in the use of force.

SPECIFIC DUTIES

A-4. Cargo guards/escorts will become familiar with the train when they report for duty. Escorts conduct a cargo check one to two hours before the train's departure with the railroad representative.

A-5. The cargo escort supervisor ensures that the guard car has enough rations to allow for any delays that might occur and ensures that supplies are adequate for the trip.

A-6. Cargo guards/escorts make cargo checks whenever the train stops for 30 minutes or more. The train conductor determines the estimated time for stops. During the cargo check, cargo escorts inspect the equipment to determine the following:

- If cargo has shifted or tie-down devices have loosened.
- If cargo has been tampered with since the last check; for example, seals missing or locks and doors unsecured.
- If cargo is missing.
- If cargo has been damaged.

A-7. During stops en route, guards are staggered along both sides of the train. Suspicious incidents or the presence of unauthorized persons are reported to the NCOIC and to railroad personnel. Guards use the buddy system to investigate incidents or to approach a suspect.

A-8. If a railcar must be removed from the train and left on a side track for maintenance, the following procedures apply:

- If the car has no sensitive or security cargo on it, no cargo escort is left with the car.
- If the car contains sensitive or classified cargo, the car must be guarded constantly.

INCIDENT REPORT

A-9. The guard or escort that discovers the problem must complete an incident report for each occurrence and give it to the person in charge of the detail. Fill out report IAW local regulations.

Immediately upon arrival at the destination, the person in charge gives the reports to the destination transportation officer, who sends them to the Military Traffic Management Command (MTMC). The report shows the following:

- What happened.
- Where the incident occurred.
- When the incident occurred (date and time).
- Which railcars were involved. (Record rail car number.)
- Who was involved in the incident.
- Who was notified of the incident.

The guard or escort must still report immediately by telephone to MTMC all major incidents that could delay a shipment en route.

Section 3 – Supercargoes

A-10. Supercargoes are personnel designated on orders by a deploying unit to accompany, secure, and maintain unit cargo on board a ship. Supercargoes will provide maintenance support, key control of vehicles and liaison during cargo reception at the sea port of embarkation (SPOE), shipload and discharge operations, and sea port of debarkation (SPOD) port clearance operations. The MTMC Operations Center notifies FORSCOM of the number of supercargo personnel allowable by ship assignment. Routine exercise and real world/contingency supercargo requirements will be coordinated through the Forces Command (FORSCOM) Operations Center. One mechanic per 30 prime movers, within the ship's berthing capability, will be the basis for determining the number of supercargoes aboard existing Roll-On/Roll-Off (RO/RO) vessels. Generally, 3-4 berths are allocated. Unit commanders may recommend the number of supercargoes required; however, the number of berths available is determined by MSC. When more than one unit deploys cargo on the same ship, FORSCOM or FORSCOM designated action agent specifies which unit will provide the OIC/NCOIC and the number of personnel each unit will provide. Unit commanders will coordinate with the Port Support Activity (PSA) prior to sending supercargoes to the SPOEs and adhere to their call forward instructions. Upon arrival at the SPOE, supercargoes are under the operational control of the port commander.

A-10. The composition of a supercargo team is dependent on several factors, including, but not limited to:

- Number of passenger berths available.
- Amount and type of vehicle/equipment deployed.
- Duration of voyage.
- Number of units deploying equipment on a ship.
- Force protection measures.

A-11. While the exact composition of the supercargo team is dependent on the factors above, a recommended composition would be the following:

- One OIC/NCOIC (a Warrant Officer with maintenance experience is the recommended rank of the OIC).
- Classified/Sensitive Cargo Escort(s) (if applicable and as required by regulations).
- Mechanics experienced and licensed on as much assigned equipment as possible.

A-12. Supercargoes are teams of soldiers who accompany, supervise, guard, and maintain unit equipment aboard the ship. An essential part of their job is to monitor and correct equipment lashings and tie-downs during movement. They also provide key control, note items that cannot be repaired en route, and brief the port commander at the SPOD on vehicle conditions and any peculiar aspects of the cargo.

A-13. Supercargoes are the deploying unit commander's on-board representatives during the movement of unit equipment on a ship.

A-14. Mechanics are required for wheeled and tracked vehicles, aircraft, and communications equipment. Supercargo personnel must be experienced and licensed on all types of vehicles being shipped. Though it may not be practical for each supercargo to be licensed on each vehicle deployed, the team must consist of qualified drivers for each vehicle on the ship.

A-15. Supercargoes are critical to shipping and maintaining the operational readiness of equipment to enhance the unit's effectiveness on arrival in the overseas theater. The supercargo team performs the following:

- Makes periodic checks of unit cargo aboard the vessel.
- Maintains key control of vehicles.
- Makes repairs as practicable.
- Documents those items that could affect discharge operations.
- Provides maintenance support and liaison during cargo reception at the SPOE and during ship loading and discharge operations and SPOD clearance operations.

A-16. The following rules help supercargoes do their job safely and effectively:

- Rule 1: The captain has the ultimate authority on the ship.
- Rule 2: The first mate is the captain's right-hand man. If you are having a problem, go to the first mate. Before the ship sails, the first mate should brief supercargo officers and non-commissioned officers (NCOs) on the following:
 - ◆ General safety requirements.
 - ◆ Fire and lifeboat drill and stations.
 - ◆ Life preserver requirements.
 - ◆ Restricted deck areas.
 - ◆ Situations (fire or ship taking water) that require immediate notification of the ship's crew and what to do in each case.
 - ◆ The ship's layout including emergency escape hatches.
 - ◆ Whistle signals and their meanings, such as collision warning whistle and abandon ship whistle.
 - ◆ The chain of command.
 - ◆ Call signs for ship's officers (for use when supercargoes are issued ship's hand-held radios).

RESPONSIBILITIES

A-17. The following is a list of responsibilities by MACOM concerning the handling of supercargoes.

Military Sealift Command

A-18. The commander, Military Sealift Command (MSC):

- Provides MTMC with berthing availability for supercargoes and indicates maximum number of berths per ship.
- Assumes operational control of supercargoes when they sign in aboard ship.
- Orients and briefs supercargoes on the ship's layout and facilities, ship procedure, protocol, and contacts during the voyage.
- Provides the vessel captain or first mate with a copy of the Standard Operating Procedure (SOP).

Military Traffic Management Command

A-19. The commander, MTMC:

- Coordinates with MSC for the number of supercargoes required on the planned report date.
- Provides a copy of the SOP to the supercargo OIC/NCOIC.
- Provides cargo operation orientation briefing to appropriate port authorities.
- Assumes operational control of supercargoes until they report onboard ship. (Supercargoes are released upon completion of port clearance operations at the SPOD to the deploying unit.)

INSTALLATIONS AND UNITS

A-20. Commanders of installations and units:

- Select and brief individuals. Supercargoes must be familiar with the overall concept of deployment and must be able to brief the MTMC terminal commander at the SPOD on the status of equipment.
- Appoint individuals on orders as supercargoes.
- Dispatch a message to the Major Command (MACOM), MTMC, and MSC identifying selected individuals by name, rank, service number, and unit.

A-21. The supercargo OIC/NCOIC:

- Reports to the port commander immediately upon arrival at the SPOE.
- Finalizes berthing, messing, and personal hygiene arrangements of the supercargoes with the vessel captain or first mate. Problems are brought to the attention of the MTMC port commander or MSC representative for resolution.
- Is responsible for discipline, such as counseling, remedial training, and uniform, and administration of Army personnel. (The parent unit keeps authority to impose nonjudicial punishment.)
- Instructs supercargoes on their responsibility to comply with the vessel regulations.
- Coordinates supercargo routine and emergency duty stations with the vessel captain or first mate.

- Establishes a duty roster for supercargoes for continued coverage of the cargo operation and full responsiveness to the MTMC port commander or vessel first mate.
- Gets permission to send personnel into the cargo areas to perform maintenance or other work from the vessel captain or first mate.
- Maintains 24-hour watch, surveillance, or contact with the vessel's first mate.
- Provides key control measures.
- Records daily supercargo activities.
- Identifies any special load/discharge requirements and specifies vehicles with problems, such as fluid leaks or flat tires.
- Provides status reports to the vessel's first mate on vehicle and equipment checks.
- Attends port operations meetings at the SPOE and SPOD to be familiar with operations and vehicle status.
- Reviews the supercargo SOP with the vessel's captain or first mate. It is important that they discuss and clearly understand the role/relationship of supercargoes aboard ship.
- Provides the first mate a manifest of the supercargoes (full name, rank, social security number, unit, place of birth, and citizenship) and leaves a copy with the port commander.
- Checks with the first mate before the ship sails to verify if additional information is required.
- Briefs team members on expected weather conditions for the next 24 hours so they can dress appropriately.
- Establishes a buddy system to check holds and makes sure each team entering a hold has a radio and checks into and out of the hold on the supercargo radio net. Records reported discrepancies for the next day's briefing and plans proper corrective actions. Supercargo team members do not go into holds alone without a radio. If the member falls and is injured, he will not be missed until the next team accountability time.
- Checks the aircraft and vehicle lashings to make sure they are properly tightened but not overtightened.
- Drills the supercargo team on lifeboat and abandon ship procedures.
- Checks all the holds for running vehicles.
- Reports suspected damage or pilferage to the MTMC port commander or designated representative.
- Provides key control of vehicles and helps port operations personnel maintain keys.
- Periodically starts vehicles near loading/discharging ramps to prevent hindering vessel discharge.

A-22. The supercargo OIC/NCOIC pays special attention to vehicles loaded on ramps and on the deck. Not only are the walking areas in these locations treacherous, but loose lashings and missing chocks could result in losing a vehicle over the side or having the vehicle break loose on the ramp and hit the ship's watertight doors at the bottom of the ramps. The OIC/NCOIC gets team members to stow all supercargo gear as soon as possible after consultation with the first mate.

COMMAND AND CONTROL

A-23. Upon arrival at the SPOE, supercargoes are under the operational control of the port commander. While onboard a ship, the supercargoes are under the command and control of the vessel's captain or first mate. Upon arrival at the SPOD, supercargoes are under the operational control of the port commander. Supercargoes are normally released to the unit on completion of port clearance operations.

DOCUMENTATION

A-24. Supercargoes may use the following forms during vessel operations: DA Form 1594, Duty log, and DA Form 2404, Equipment Inspection and Maintenance Worksheet.

DUTY LOG

A-25. Supercargoes should use DA Form 1594 to record their daily activities. Mandatory entries include checks of equipment, key control actions, and damage reports. If the situation is severe, the supercargo requests the information be transmitted to the SPOD from the ship while en route.

DEFICIENCIES

A-26. Record deficiencies and any corrective actions on vehicles and equipment on DA Form 2404.

EQUIPMENT

A-27. In addition to personal items required to support the supercargo, sufficient maintenance-related items must accompany the supercargo. This includes but is not limited to the following:

- Tool set, general mechanic's (one per mechanic).
- Jumper slave cable (one set per deck).
- Battery charger (one).
- Class III and IX (limited items) required for repair en route, such as batteries, headlights, reflectors, oil, lubricants, and deicer.

Appendix B

Sample Unit Movement Operations SOP

This appendix provides ideas, data, and a template for the development of a unit movement SOP, and is not intended to be all inclusive, rather it intends to identify those things that a unit must consider and plan for when preparing for deployment. Use only those items that apply.

STANDING OPERATING PROCEDURES Unit Movement Operations

Unit

1. APPLICATION. Identify operations that are applicable to this SOP.
2. PURPOSE: Define the purpose of this SOP, and how it will be used to support movement operations within the unit.
3. REFERENCES. Identify any FMs, TMs and any higher headquarters SOPs that may be applicable to developing your unit's SOP.
4. RESPONSIBILITY FOR PREPARATION, CHANGES, REVISIONS. Identify the section or individual responsible for preparation of this SOP, and to whom recommended changes or revisions should be routed through.
5. EFFECTIVE DATE:
6. MOTOR MOVEMENT.
 - a. Vehicles. Preparation for movement.
 - b. Motor marches.
 - (1) Strip maps.
 - (2) Route reconnaissance.
 - (3) Messing and refueling.
 - (4) Night marches.
 - (5) Makeup of march units and serials.
 - (6) Vehicle gap.
 - (7) Speed and rate of march.
 - (a) Column rate of march.
 - (b) Lead vehicle speed.

(c) Permissible catch-up speed.

(d) March unit or serial time length.

(8) Posting traffic guards during halt.

c. Infiltration.

d. Personnel. Conduct during movement.

(1) Passengers.

(2) Drivers.

7. VEHICLE AND EQUIPMENT OPERATIONS.

a. Motor pool.

(1) Dispatch.

(2) Service.

(3) Maintenance.

b. Administrative vehicles. Regulations.

8. RAIL MOVEMENTS.

a. S1 Action. Movement policy.

b. S2 Action.

(1) Reconnaissance report.

(2) Security.

c. S3 Action.

(1) Troop list.

(2) Rail Guards

(3) Transportation movement teams.

d. S4 Action/UMO

(1) Transportation request.

(2) Troop and guard mess.

- (3) Blocking and dunnage.
- (4) Shipping documents.
- (5) Rolling stock.
- (6) Loading schedules and area.
- (7) Load Teams.

9. AIR MOVEMENT.

- a. S1 Action.
- b. S2 Action.
- c. S3 Action.
 - (1) Aircraft required.
 - (2) Drivers.
 - (3) Loading schedule and areas
 - (4) Air-transportability technique.
- d. S4/UMO Action.
 - (1) Transportation request.
 - (2) Availability of tie-down devices or material.
 - (3) Equipment weight data for loading computation.
 - (4) Shipping documents.
 - (5) Vehicles required to load and unload aircraft.
 - (6) Load Plans.
 - (7) Passenger Manifests.
 - (8) Cargo Manifests.
 - (9) Loading Teams.
 - (10) Marshaling Area Actions.
 - (11) Alert Holding Area Actions.
 - (12) Loading Ramp Area Actions.

(13) Actions at the APOD.

10. WATER MOVEMENT.

a. S1 Action. Movement policy.

b. S2 Action.

(1) Reconnaissance report.

(2) Security.

c. S3 Action.

(1) Troop list.

(2) Loading plan.

(3) Supercargoes.

d. S4/UMO Action.

(1) Transportation request.

(2) Troop mess.

(3) Shipping documents.

(4) Vessels required.

(5) Loading schedule and area.

(6) Passenger Manifests.

(7) Cargo Manifests.

(8) Marshaling Area Actions.

(9) Staging Area Actions.

(10) Actions at the SPOD.

Appendix C

CONVOY OPERATIONS

C-1. A motor convoy is a group of vehicles organized for the purpose of control and orderly movement with or without escort protection. This appendix provides guidance for planning, organizing, and conducting convoys. A convoy is defined as follows:

- Any group of six or more vehicles temporarily organized to operate as a column, with or without escort, proceeding together under a single commander.
- Ten or more vehicles per hour dispatched to the same destination over the same route.
- Any one vehicle, with or without escort, requiring the submission of a special hauling permit.

CONVOY MOVEMENT REQUESTS

C-2. Civil and or military highway authorities set limits on vehicle weight, length, width, and height to ensure the safety of the highway user and to preclude damage to the highway. Department of Defense (DOD) policy states that vehicle movement that exceeds legal limitations or regulations, or that subjects highway users to unusual hazards, WILL NOT be made without permission from regulating state, local, or toll authorities. Units will transport loads that exceed maximum allowable weight or dimensions by other modes or by commercial transporters that conform to the limits of each state.

C-3. Dimension and weight limitations on vehicles vary. Check local rules and restrictions before any military motor movement.. For gross planning purposes, vehicles are normally considered over dimensional or overweight if they exceed the following:

Width	102 inches
Height	162 inches (13 feet, 6 inches)
Weight	20,000 pounds for single axles 34,000 pounds for tandem axles 80,000 pounds for gross weight
Length	48 to 60 feet for semi-trailers

C-4. Units planning to convoy must request and receive clearance before beginning movement. The request is submitted through command channels to the installation transportation office (ITO) or movement control element within whose area the convoy originates. Requests may be prepared manually or through TC-AIMS II. TC-AIMS II provides the unit the capability to prepare convoy requests and generate calculations based on parameters provided by the unit.

C-5. Once the convoy clearance request has been reviewed and processed by the approving authority, the unit is issued a convoy clearance number (CCN). The movement of the convoy must be conducted as the convoy clearance directs. Deviations are not authorized without prior coordination with the approving authority.

C-6. The convoy commander must ensure that the routing specified on the approved convoy clearance is followed and that the estimated time of departure and estimated time of arrival are met at each of the checkpoints and rest halts.

C-7. Special provisions apply during a national defense emergency and other critical DOD moves. During emergencies, ITOs request permits and clearances by the most expeditious means of communication available. Convoys and oversize/overweight moves must be coordinated with civil authorities to ensure that the selected routes are passable. Verbal coordination is sufficient in emergencies and coordinated moves need not have prior written permits from civil authorities. The unit obtains confirming written approval from state or other authorities after the fact.

CONVOY PLANNING

C-8. All convoy movements must be planned in advance. The following factors and formulas will assist in convoy calculations.

Time-Distance Factors

C-9. Time-distance factors are used to perform calculations for planning highway movements. Understanding time and distance factors is critical when planning a convoy. Figure C-1 shows the relationship between distance factors and time factors.

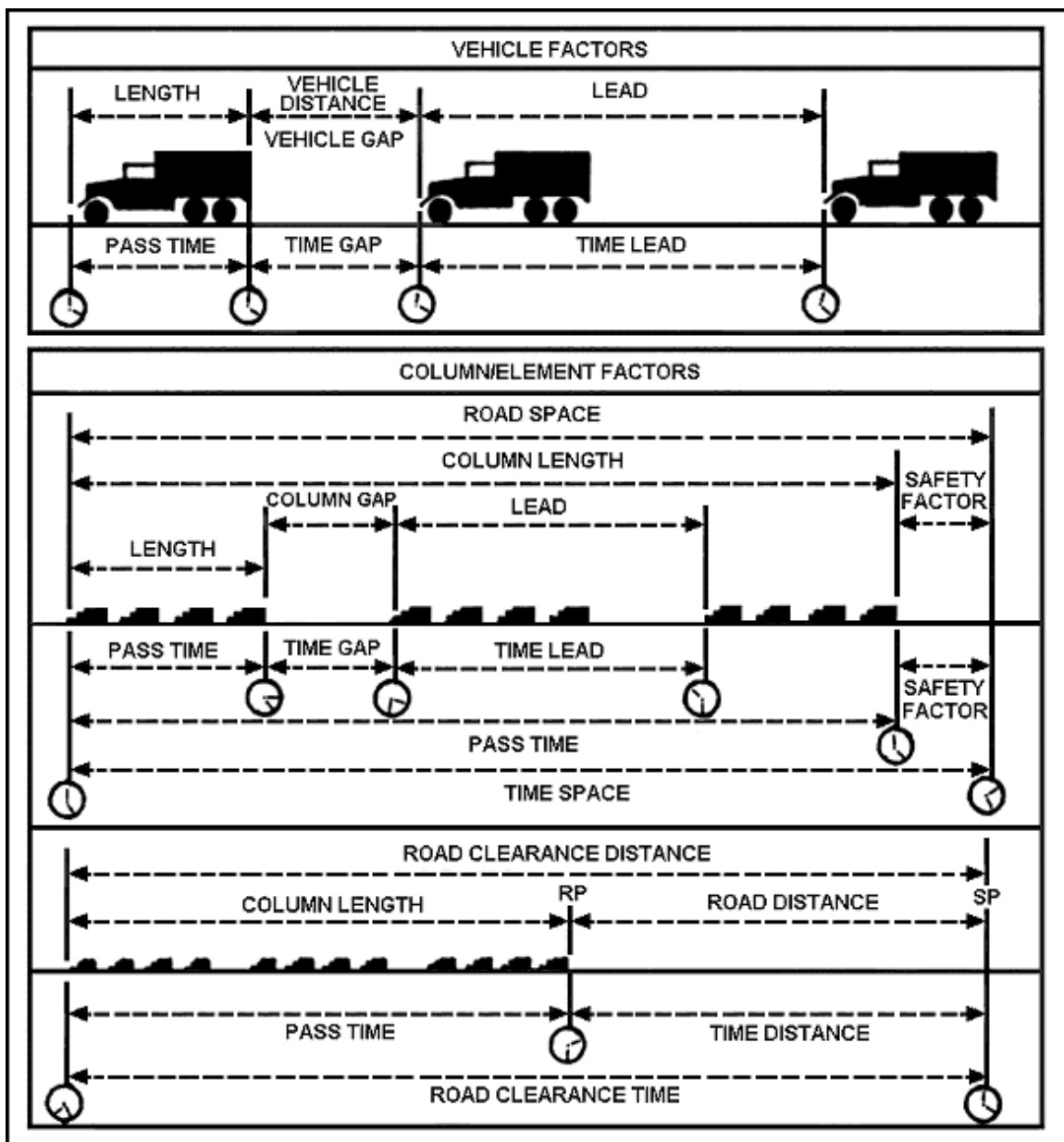


Figure C-1. Distance and Time Factors

C-10. Distance factors are expressed in kilometers or miles. The following explains distance factors:

- **Column Length** is the length of the roadway the convoy occupies, measured from the front bumper of the lead vehicle to the rear bumper of the trail vehicle.
- **Road Space** is the length of a convoy plus any additional space added to the length to avoid conflict with leading and following traffic.
- **Gap** is the space between vehicles (vehicle interval) or between elements of a convoy (column gap). It is measured from the rear of one element to the front of the following element. (A simple method to use is the "4 Second Rule." It establishes an interval of four seconds between vehicles in the convoy. The interval can be maintained regardless of the speed of the convoy, and it allows for the space between vehicles to be adjusted as the rate of march changes.)
- **Road Distance** is the distance from point-to-point on a route.
- **Road Clearance Distance** is the distance that the head of a convoy must travel for the entire convoy to clear a given point along the route. It is the sum of the convoy's column length and road distance.

C-11. Time is expressed in hours or minutes. The following describes time factors:

- **Pass Time** is the time required for a convoy or a subgroup to pass a given point on the route.
- **Time Space** is the time required for a convoy or one of its subgroups to pass any point along the route plus any additional time required for safety.
- **Time Gap** is the time interval between vehicles or elements as they pass a given point. It is measured from the trail vehicle of one element to the lead vehicle of the following element.
- **Time Lead** is the time between individual vehicles or elements of a convoy, measured from head to head, as they pass a given point.
- **Time Distance** is the time required for the head of a convoy or any single vehicle to move from one point to another at a given rate of march.
- **Road Clearance Time** is the total time a convoy or an element needs to travel over and clear a section of road. Road clearance time equals the pass time plus time distance.

Road Movement Calculations

C-12. To complete a movement request, the moving unit must determine the arrival and clearance times at the SP, CPs, halts, and RP. Clearance times must be calculated for all march elements within the convoy. Use the following formula to compute the time distance of the convoy:

$$\text{Time Distance} = \text{Distance/Rate}$$

To calculate the clear times at each point along the route, planners must determine the pass time. Calculating pass time requires two calculations: vehicles per mile (density) and pass time. Use the following formulas to compute density and pass time:

$$\text{Density} = \frac{1 \text{ mile (1,760 yards)}}{\text{vehicle gap (yd)} + \text{average vehicle length (yd)}}$$

$$\text{Pass Time} = \frac{\text{number of vehicles} \times 60 + \text{time gap}}{\text{density} \times \text{rate}}$$

Preparation Of The Graphic Strip Map

C-13. The strip map shows a picture of the route over which the convoy will travel. The strip map is detailed but not so cluttered with information that it is unreadable (See Figure C-2). The following items must be shown on the strip map:

- Start point. The SP is the location where the convoy must start and comes under the active control of the convoy commander. As the SP is passed, each element should be traveling at the rate of speed and vehicle interval stated in the OPORD. When selecting an SP, select a place that is easily recognized on the map and on the ground.
- Release point. The RP is the place where convoy elements are released to their owning units. It must be clearly shown on the strip map. As with the SP, the convoy passes the RP without halting and at the rate and vehicle interval stated in the OPORD.
- Halts. Scheduled halts provide rest, messing, refueling, maintenance, and schedule adjustment, while allowing other traffic to pass. Halt time is included in the road march. Generally, all elements of the convoy halt at the same time so that the time gaps between elements remain the same. Every effort should be made so that dining and refueling halts coincide.
- Critical points/checkpoints. CPs are designated along the route for control and maintenance of the schedule. Choose easily recognized features as CPs.
- Distance between CPs.
- Arrival and departure times at the SP, CPs, RP, state lines, and all halts.
- Convoy routes. Route data, including route numbers, major intersections, and mileage between points.
- Major cities and towns.
- North orientation.
- Logistical support data, including the location of all logistical support facilities. This must also include the procedures for requesting/obtaining medical and maintenance support.

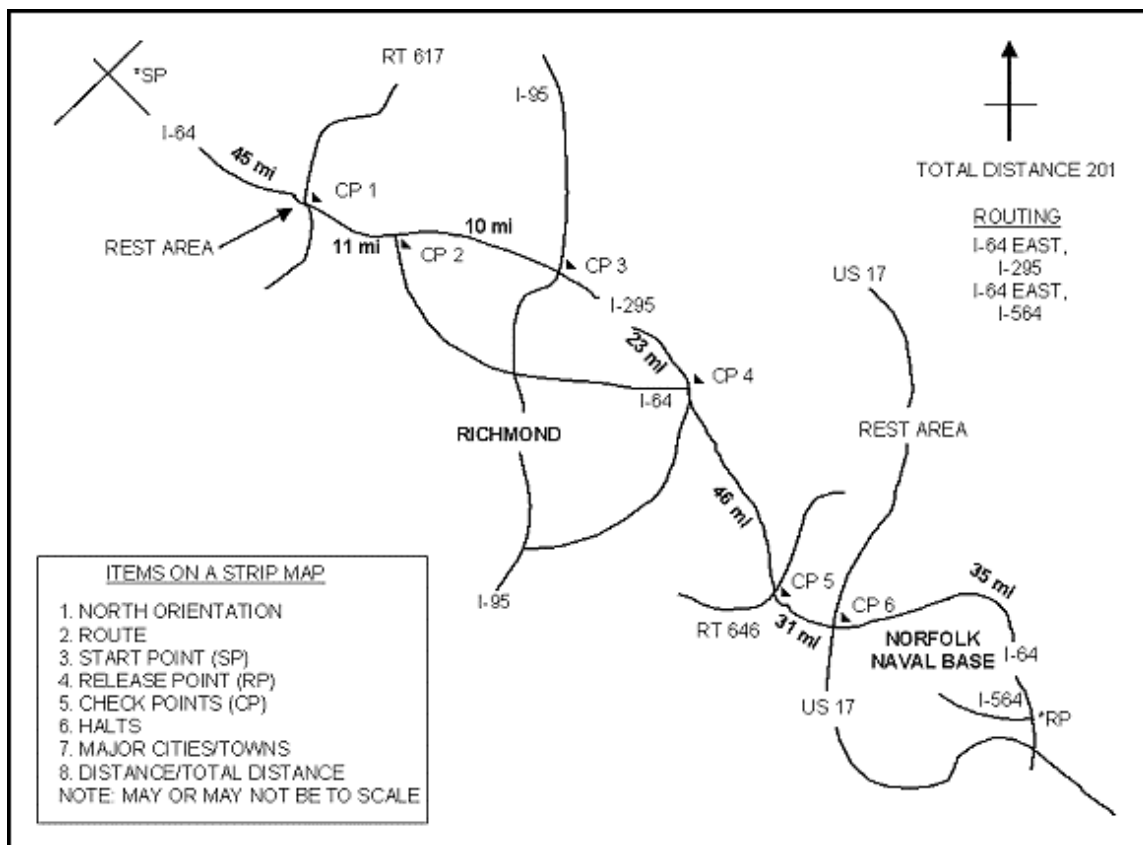


Figure C-2. Strip Map

CONVOY ORGANIZATION

C-14. The organization of a convoy consists of organizational and functional elements.

Organizational Elements

C-15. A convoy commander can better control a convoy if it is broken into smaller, more manageable groups. Whenever possible, convoys are organized along organizational lines, such as platoon, company, and battalion. The three organizational elements of a convoy are a march column, a serial, and a march unit (see Figure C-3). They are described as follows:

- A **march column** is a group of two to five serials. It represents approximately a battalion-to-brigade size element. Each column has a column commander.
- A **serial** is a subdivision of the march column. It consists of elements of a march column (convoy) moving from one area over the same route at the same time. All the elements move to the same area and are grouped under a serial commander. The serial commander is directly responsible to the convoy commander. A serial may be divided into two or more march units.

- A **march unit** is a subdivision of the serial. It comes under the direct control of the march unit commander. It is the smallest organized subgroup of the convoy and usually will not exceed 20 vehicles.

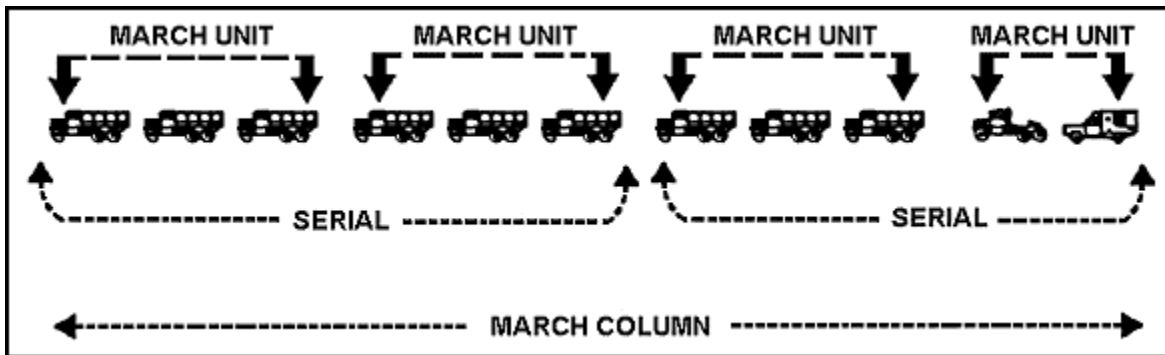


Figure C-3. Convoy Organizational Elements

Functional Elements

C-16. All convoys, regardless of size, are made up of three functional elements. These elements are the head, the main body, and the trail (Figure C-4) and are explained as follows:

- The head is the first vehicle of each column, serial, or march unit. It carries the pacesetter, who sets the pace to maintain the prescribed schedules and rates of march. The pacesetter leads the convoy on the proper route. With the head performing these duties, the convoy commander is free to move up and down the convoy to enforce march discipline.
- The main body follows right behind the head (pacesetter) and consists of the majority of vehicles in the convoy. It is the largest part of the convoy. It can be subdivided into serials and march units for easier control and management.
- The trail is the last section of a march element. The trail consists of recovery, maintenance, and medical support. The trail officer is responsible for march discipline, breakdowns, straggling vehicles, and control at the scene of any accident involving his march unit until the arrival of civilian authorities.

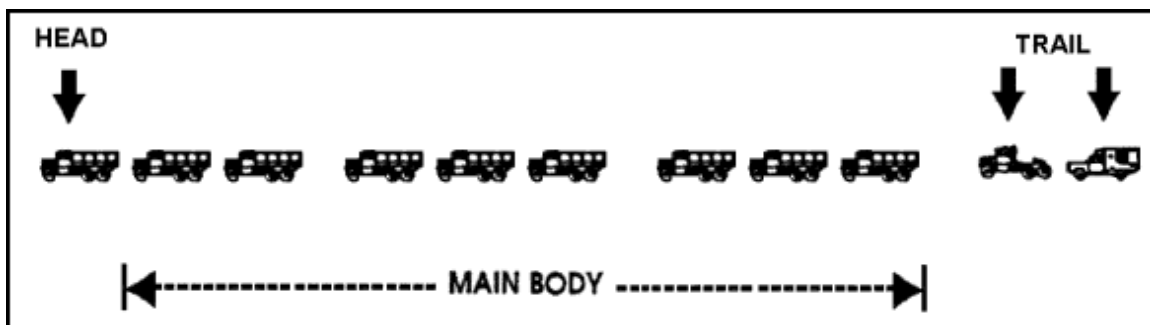


Figure C-4. Functional Elements of a Convoy

TYPES OF FORMATIONS

C-17. The convoy must be organized to meet mission requirements and provide organizational control. The convoy commander decides how the convoy is formed for movement. The three basic types of formations are close column, open column, and infiltration. They are described as follows:

- Close column provides the greatest degree of convoy control. It is characterized by vehicle intervals of 25 to 50 meters and speeds under 25 mph. Close column is normally used during limited visibility or on poorly marked or congested roads.
- Open column is the preferred formation used during movement. It is characterized by vehicle intervals of 100 meters or more and speeds in excess of 25 mph. Open column is normally used on well marked open roads with good visibility.
- Infiltration has no defined structure. Vehicle intervals and speeds may vary. This type of formation is normally not used during movement. Infiltration should only be used as a last resort in extremely congested areas or when the mission dictates.

CONVOY COMMANDER

C-18. Each convoy will be organized under the control of a convoy commander. Since the convoy commander must be free to supervise the movement of the convoy, there is no specified location for him in the convoy. The convoy commander should have contact with all subordinate commanders during the movement. (See Convoy Commander Checklist at Annex 1.)

SERIAL AND MARCH UNIT COMMANDERS

C-19. Serial and march unit commanders are positioned where they can best control their convoy element. Although commanders may want to place themselves at the head of their units, it is not recommended because this restricts their ability to control all of their vehicles.

NOTE: Convoy, serial, and march unit commanders should avoid driving in the left hand lane because the limited speed of military vehicles can easily cause them to become a hazard to faster moving civilian traffic.
--

PACESETTER

C-20. The convoy commander will designate a pacesetter for the convoy. The pacesetter is in the first vehicle in the march element, normally the slowest, heaviest vehicle, excluding oversize and overweight vehicles. The pacesetter performs the following:

- Maintain the rate of march established by the convoy commander.
- Meet all established times at SP, CP, and RP.
- Inform the convoy commander of any obstacles or hazards that may cause a deviation from the established route, such as construction, detours, or other obstacles.

TRAIL OFFICER

C-21. The trail officer is positioned at the rear of a march element. He checks and observes vehicles at the SP and keeps the convoy commander informed on the status of vehicles that fall out of the convoy. He oversees all maintenance, recovery, accident investigation, medical aid, and disposition of disabled equipment. He picks up all guides and markers left by preceding march elements.

GUIDES

C-22. Guides are used to ensure the convoy follows the prescribed route and become very important when operating in an area where road signs are poor or nonexistent. They assist convoys in locating supported units, preventing conflict with other convoys, and providing information on the route.

C-23. Guides are instructed that the convoy does not have priority over civilian traffic when not on a military reservation. Guides do not have authority to disregard traffic lights or other traffic devices on public roads.

CIVILIAN POLICE ESCORT

C-24. If civilian or military police escort is required, the UMC coordinates with the appropriate officials to secure the assistance of civilian and military police areas through which the convoy will pass. These areas include the following:

- Major intersections.
- Entrances to and exits from expressways, interstates, and other main routes.
- Densely populated and industrial areas.
- Entrances to and exits from rest halt areas.

VEHICLE PLACEMENT

C-25. The placement of the vehicles in an organizational element of a convoy is determined by many factors. One of the major factors is the danger of rear-end collisions. To reduce the possibility of injury to personnel, place vehicles transporting troops in the first march unit of the main body of the convoy. When empty trucks or trucks loaded with general cargo are available, use them as buffer vehicles between those transporting personnel and those loaded with hazardous cargo. Other factors to consider include the following:

- Position those vehicles that require the longest unloading time near the front of the main body of the convoy. This will shorten the turnaround time.
- Position one prime mover without trailer (bobtail) per 10 vehicle-trailer combinations to support the recovery operations.
- Place vehicles transporting hazardous cargo in the last serial of the convoy but not in the trail party.

CONVOY COMMUNICATIONS

C-26. Convoy commanders and NCOICs must effectively communicate with their subordinate leaders and vehicle drivers. Communications must be well planned and understood by all personnel involved in the movement. Radio is the principal means of communications within a motor convoy. Radio allows for the rapid transmission of orders and messages between widely separated elements in

a convoy. Plans for radio use must be given in orders, in the unit SOP, and in the movement plan. Consideration needs to be given to the number of radios in the unit and distance over which elements of the convoy are trying to communicate.

C-27. Other means of communication are visual communications. These may involve hand and arm signals, flags, headlights, and protechnic signals and messages. In addition to hand and arm signals, messages may be written on a board and posted along the route or displayed by a guide in view of the oncoming vehicles. In the event of radio silence or for other reasons, the drivers or their assistants can use visual signals for convoy control. These signals should be specified in an SOP so that drivers are completely familiar with them. The signals must also be trained and rehearsed.

C-28. The next group of signals include audio, which consists of the use of horns, whistles, and verbal messages. When possible, serial commanders should be equipped with loudspeakers to issue verbal instructions.

CONVOY IDENTIFICATION

C-29. Convoy identification includes CCN and vehicle identification. These are discussed below.

Convoy Control Number

C-30. Within CONUS the UMO coordinates with the UMC on submitting DD Forms 1265/1266 for convoy clearance and permits for moving oversized/overweight vehicles. TC-AIMS II provides the capability for preparing the DD Form 1265 and DD Form 1266. The UMC provides the clearance request to the state area command (STARC). The STARC is responsible for processing all convoy clearances and special hauling permits through the STARC MOBCON system. The STARC consolidates the requirements and uploads the requirements into MOBCON. MOBCON is used to schedule the road use and generate approved clearances. The STARC returns the approved convoy clearances to the originating UMC. MOBCON approves and provides convoy clearance numbers and secures routing through all states involved with the convoy. Limitations, including hours of movement for oversized, overweight shipments, are predicated on traffic congestion periods and hazardous operating conditions. Limitations are determined by each state and can vary considerably and may specify a different schedule or route of march than was requested. Each convoy is identified by its CCN. The CCN identifies the convoy during its entire movement. It is placed on both sides of each vehicle in the convoy. The CCN is also placed on the top of the hood of the first and last vehicles of each march element.

C-31. The MOBCON prepared CCN has eight digits. The first two digits identify the location (post or state) from which the convoy originates. The next five digits (3-7) are a number assigned in sequence by fiscal year (FY). The last is a single character indicating the type of movement. The type of movement designators are as follows:

Outsize/overweight vehicles.	- S
Explosives.	- E
Hazardous cargoes.	- H
All other convoys.	- C
Example is VA-04326-H, a convoy in VA hauling HAZMAT, sequence number 04326 in this FY.	

NOTE: In other countries, the CCN may be different than what is described above based on command directives, HN, or STANAG. The request for a CCN is submitted to the MCT which will issue the CCN under the local governing regulations and directives.

There are provisions for a manually prepared CCN. It is usually composed of ten digits. The first two digits identify the location (post or state) from which the convoy originates. The next four digits (3-6) represent the Julian date, followed by the a three digit sequence number (7-9). The tenth character is the movement designator.

Vehicle Identification

C-32. The first vehicle (pacesetter) in each element of the convoy must have on its front a sign with 4-inch black letters on a yellow background reading CONVOY FOLLOWS. The last vehicle of each convoy element will have on the rear a sign reading CONVOY AHEAD. CONVOY AHEAD signs are not on maintenance or medical vehicles unless that vehicle's purpose is to represent the end of the convoy.

C-33. Mark each march element of a convoy with flags 12 inches in height and 18 inches in length. The lead vehicle is fitted with a blue flag and the rear vehicle with a green flag. Mount the flag on the left front of the lead and trail vehicle so that it will not interfere with the vision of the driver or with any functional component of the vehicle (see Figure C-5).

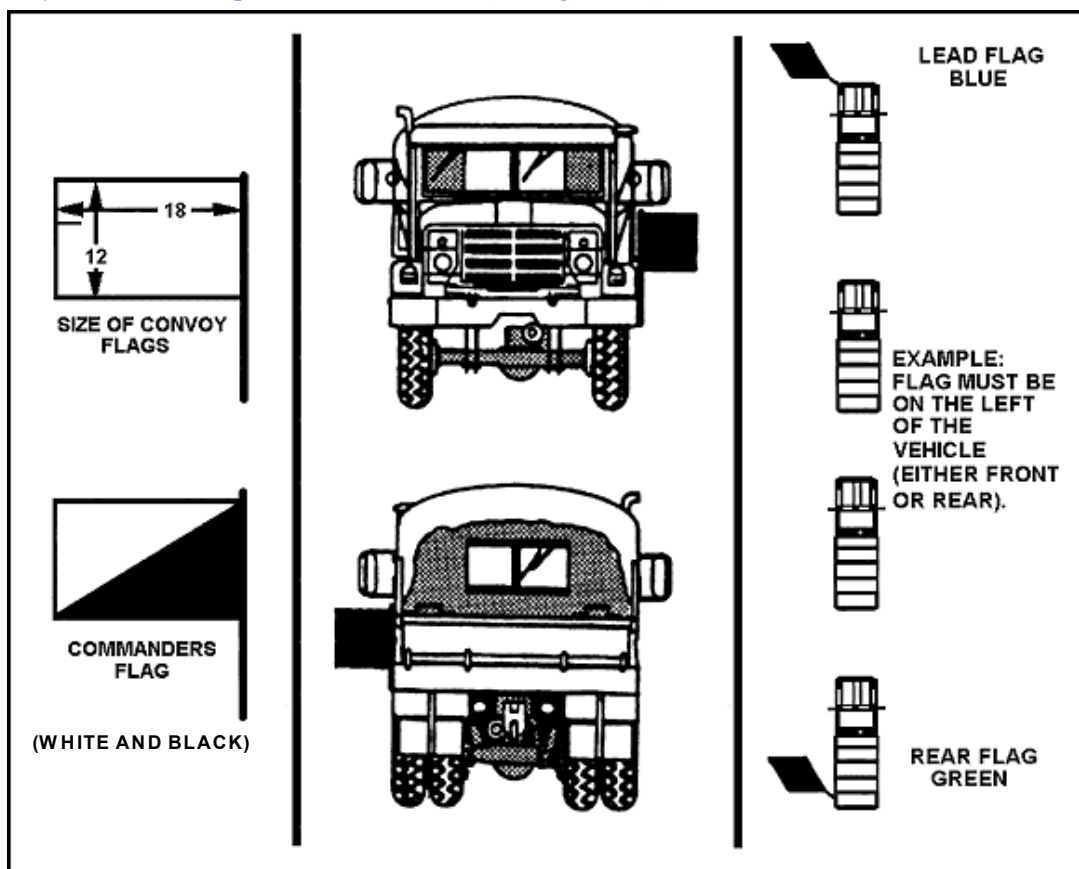


Figure C-5. Flag Placement on a Vehicle

C-34. The vehicles of the column, serial, and the march unit commanders must carry on the left front bumper a **white and black flag**. Trail party vehicles will carry an **international orange safety flag**. Local police or MP escort vehicles will not display convoy identification flags. Convoy identification flags are available through local supply channels as follows:

White and Black Flag	8345-00-543-6911
International Orange Flag	NSN NOT AVAILABLE
Green Flag	8345-00-543-6913
Blue Flag	8345-00-543-6912

C-35. A rotating amber warning light will be placed on cranes (wreckers), oversize or overweight vehicles, and the first and last vehicles in a convoy. The lights will be on at all times when the convoy is operating outside a military installation.

Other countries may have additional or conflicting marking requirements for safety and identification. When convoys are operated in other countries, the laws and regulation of those countries prevail. The servicing MCT has information on HN marking requirements.

SAFETY EQUIPMENT AND WARNING DEVICES

C-36. While moving at night or during periods of reduced visibility, lead, trail, and oversize and overweight vehicles will operate four-way flashers. Convoy vehicles will also display reflective L-shaped symbols 12 inches long and 2 inches wide at the lower corners of the vehicle's body. (See Figure C-6.)

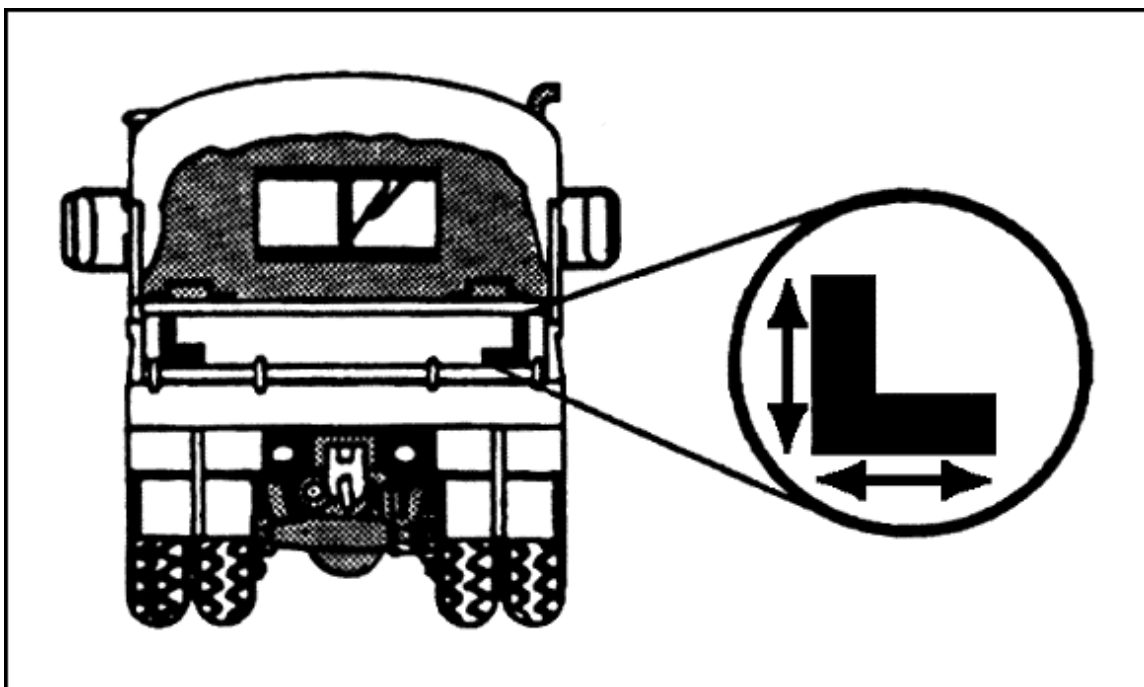


Figure C-6. Reflective L-Shaped Symbol

C-37. Headlights of all vehicles moving in convoy or halted on road shoulders must be on low beam at all times except where prohibited by local ordinances. While halted on shoulders, vehicles equipped with emergency flasher systems must also have these lights operating. The following safety equipment is needed in all vehicles:

- A fire extinguisher suitable for a petroleum fire.
- A first aid kit.
- A set of tire chains when snow or ice conditions may be encountered.
- A highway warning kit (that complies with local and national requirements).

C-38. Road guides must wear high visibility devices such as a reflective vest. Baton flashlights must also be provided when the convoy operates during darkness or when visibility is reduced to 500 feet or less.

FINAL ACTIONS BEFORE DEPARTURE

C-39. The convoy commander or his designee inspects all vehicles in the convoy staging area to ensure that they are in satisfactory condition. He ensures on-the-spot corrections are made as soon as possible. Vehicles should be checked for:

- Completed dispatch.
- Completed PMCS and deficiencies and shortcomings are corrected.
- Required basic issue items.
- Appropriate fuel levels.
- Appropriate safety equipment (fire extinguishers, first aid kit, and so on.)
- Secured secondary loads.
- Correct CCN, flags, signs, lights, and placards.
- Activated headlights (low beam).

C-40. The convoy commander or his designee inspects the drivers and ensures the following:

- Drivers and assistant drivers possess a valid operators licence.
- Drivers with experience are selected to operate vehicles on public highways.
- Drivers are prepared, are in the proper uniform, and have required equipment.
- Drivers have 8 hours of rest within 12 hours before the convoy departs.

NOTE: The assistant driver remains awake at all times and keeps the driver alert. The use of an assistant driver DOES NOT double the amount of driving time for the convoy.

C-41. After vehicles and drivers have been inspected and the convoy is organized and ready to move, the commander assembles the convoy personnel for a final briefing before the convoy departs. The commander issues orders and strip maps to drivers and uses an enlarged strip map (a blackboard drawing or other drawing) to explain details of the route. A sample briefing is at Attachment 2. The commander briefs the following topics:

- Convoy organization and vehicle assignments.

- Departure and arrival times.
- Compliance with traffic signals.
- Route of march.
- Maximum and minimum speeds.
- Actions at halts.
- Route and highway markers in accordance with the strip map.
- Vehicle gaps or intervals (for urban areas, expressways, conventional routes, and entrance and exit routes).
- Rest stops and refuel points schedules.
- Vehicle recovery operations.
- Obedience to civil authorities and MP.
- Location and time of scheduled halts.
- Action to take if separated from the convoy.
- Actions in the event of breakdown or accident.
- Procedures for refueling.
- Communications/signal procedures.
- Light discipline.
- Security en route and during halts.
- Weather forecast and actions during inclement weather.
- Chain of command and locations.
- Safety during movement and during halts.
- Tolls or other fees arrangements.

CONVOY EXECUTION

C-42. Convoys must depart staging or marshaling areas in sufficient time to pass the SP at the prescribed time. Convoy commanders should use the close column formation when moving from the staging area to the SP of the main convoy route.

Traffic

C-43. Main convoy routes are usually characterized by heavy, fast-moving traffic. Entering the route is a critical operation, but the risk can be reduced when civilian police assist by controlling traffic.

C-44. Ensure that all vehicles remain in the right lane after the convoy has entered the flow of traffic. Where the right lane is reserved for traffic turning off at the next exit, the convoy should use the next adjacent lane. Drivers must be alert and drive defensively.

C-45. To leave the route, either to enter a rest area or to take another route, move vehicles to the deceleration lane at the earliest opportunity and reduce to a safe speed to exit. Commanders should ensure that all vehicles remain with the convoy element.

Scheduled Halts

C-46. Schedule halts so that the convoy will halt for 15 minutes at the end of the first hour of operation and 10 minutes every 2 hours thereafter. Minor adjustments to this schedule can be made

when a suitable area is not available at these time periods. Schedule all meals and refueling halts at the same time. Take the following precautions when halting the convoy:

- Avoid areas on curves or reverse sides of hills.
- Leave enough room to allow the vehicles to park off the paved portion of the road and return to the road safely.
- Maintain a minimum distance of three feet between parked vehicles.
- Do not permit convoy personnel on the traffic side of vehicles except to perform prescribed maintenance.
- Make sure drivers and assistant drivers perform prescribed maintenance and check the security of cargo.
- Post guards at least 50 meters behind the last vehicle to warn traffic when departing a rest area.
- Ensure that there is space for other vehicles. Convoy vehicles should not occupy more than 50 percent of the parking area at any time.
- Maintain a sufficient time gap between serials to allow one to clear a rest area before the following serial arrives.

Unscheduled Halts

C-47. Move a disabled vehicle immediately from the traffic lane to a location where it will not be a hazard to other traffic. If a breakdown occurs, place a highway warning device either in the obstructed lane or on the shoulder of the road if the vehicle is on the shoulder. Do this before any attempt is made to repair the vehicle. **DO NOT** use military personnel to warn traffic by manual flagging except where warning devices do not give adequate warning.

C-48. In the event of an accident, make every effort to minimize its effects and keep the convoy moving. Do the following if an accident happens in the convoy:

- Keep moving. Only the vehicle immediately behind the vehicle should stop and render assistance.
- Give first aid. Give immediate attention to injuries.
- Report any accident to civilian police and wait for assistance. Do not move the damaged vehicle until an accident investigation has been completed by civilian police.
- Trail parties will assist civil authorities, investigate, and recover the vehicle as required.
- Clear the traffic lane. The crew of the affected vehicle should make every effort to clear the traffic lane as soon as possible.
- Complete accident report forms needed for US Army and any state and federal requirements.

C-49. The first officer or NCO to arrive at the scene of the accident will take charge by supervising emergency aid, directing military traffic, warning civilian traffic, and directing the placement of warning devices until the trail officer arrives. The trail officer, aided by available medical and maintenance personnel, will supervise and direct care of the injured and disposition of the damaged vehicles. Further assistance needed should be requested from the agencies listed in the convoy OPORD.

MOVEMENT REPORTS

C-50. The convoy commander normally provides a movement report to the next higher HQ. During deployment and selected exercises, special instructions included with the approved convoy clearance directs the convoy commander to report to the appropriate HQ upon departure, at selected halt locations, and upon arrival. As a minimum, the report should contain the following:

- Convoy clearance number and convoy commander's name.
- Time of arrival at scheduled halts.
- Time of arrival at state lines or country borders.
- Complete details and circumstances of any accident or incident.

ANNEX 1: CONVOY COMMANDER'S CHECKLIST

Here is an example of a Convoy Commander's Checklist:

<u>CONVOY COMMANDER'S CHECKLIST</u>			
	YES	NO	NA
Has a reconnaissance of the approved route been made and a strip map prepared?			
Have overweight, oversize, or exceptionally slow vehicles been identified and provisions made for their movement?			
Is there a listing of contacts, available along the route in case of incident or accident?			
Are specific provisions made to preclude the carrying of passengers in the last vehicle of an element?			
Are convoy identifying signs available and in good repair?			
Are trucks that are to carry personnel equipped with first aid kits?			
Do vehicles that are required to operate at night have the "L" shaped reflective symbol in the lower left corner of the tailgate?			
Are flags (BLUE for lead vehicle, GREEN for trail vehicle, and BLACK and WHITE for the convoy commander) available and in good order?			
Does each vehicle of the proposed convoy contain a basic highway warning kit appropriate for the vehicle?			
Do vehicles transporting compressed gases, explosives, or flammables have flashing lanterns in lieu of flares or fuses?			
Have HAZMAT been packed, marked, and placarded according to law and regulation?			
Have packing, marking, and placard of HAZMAT items been certified by a properly trained individual?			
Have provisions been made to pay for toll roads, bridges, etc.?			
Have possible rest stops or break areas along the route been identified on strip maps?			
Is a comprehensive checklist for the convoy available?			
Have provisions been made for inoperable vehicle recovery?			
Has a start point been identified?			
Have all host nation convoy requirements been met?			
Have shipping papers for HAZMAT been completed and signed by a DOD school-trained certifier?			
Has the release point been identified?			
Has the convoy movement order been reviewed to determine the route?			
Can bridges and narrow passageways safely accommodate all loaded or tracked vehicles?			

<u>CONVOY COMMANDER'S CHECKLIST</u>			
	YES	NO	NA
Are critical points known and listed on strip maps?			
Has the size of march units been determined?			
Has the rate of march on the convoy movement order been verified?			
Has the vehicle interval on open road been determined?			
Has the type of column been determined?			
Have provisions been made for refueling, if required?			
Has a suitable bivouac site been selected, if required?			
Have convoy clearances been obtained, if required? Is clearance documentation available for inspection en route?			
Is escort required and has it been requested?			
Are spare trucks available for emergencies?			
Are vehicles fully serviced, clean, and ready for loading?			
Are loads proper, neat, and balanced?			
Are drivers properly briefed?			
Is the convoy marked front and rear of each march unit?			
Are guides in place?			
Are blackout lights functioning?			
Are maintenance services alerted?			
Is maintenance truck in rear?			
Are medics in rear?			
Is there a plan for casualties?			
Are all interested parties advised of the estimated time of arrival?			
Are all vehicles properly marked and do they have a military shipment label (MSL) applied?			
Is officer at rear of convoy ready to take necessary corrective action such as investigating accidents, unusual incidents, and changing loads?			
Has a trail officer been identified?			
Is there a personnel/cargo loading plan?			
Has a plan been made for feeding personnel?			
Has time been established for formation of convoy?			
Has time been established for releasing trucks?			
Is a written operations order on hand, if required?			
Will a log of road movement be required at end of trip?			
Has weather forecast been obtained?			
Do all personnel have proper clothing and equipment?			
Is there a communications plan?			
Are personnel prohibited from riding in the cargo compartments of vehicles transporting ammunition?			

<u>CONVOY COMMANDER'S CHECKLIST</u>			
	YES	NO	NA
Are drivers of ammunition vehicles briefed on accident emergency response procedures and the required withdrawal distances in the event of a fire? (DD Form 836)			
Are the marshaling areas for ammunition or explosive laden vehicles separated from unrelated personnel, equipment, and facilities by the appropriate distance?			

ANNEX 2: SAMPLE CONVOY BRIEFING

Here is a sample outline for a convoy commander's briefing:

◆ **Situation:**

- Friendly forces.
- Supported Units.
- Enemy situation.

◆ **Mission:**

- Type of cargo.
- Origin.
- Destination.

◆ **Execution:**

- General organization of the convoy.
- Time schedule.
- Routes.
- Convoy speed.
- Catch-up speed.
- Vehicle distance.
- Emergency measures.
 - Accidents.
 - Breakdowns.
 - Obstacles.
 - Separation from convoy.
 - Ambush.
 - Action of convoy personnel if ambushed.
 - Action of security forces during ambush.
 - Medical support.

◆ **Administrative and Logistics:**

- Control of personnel.
- Billeting arrangements.
- Messing arrangements.
- Refueling and servicing of vehicles, complying with spill prevention guidelines.

◆ **Command and Signal:**

- Location of convoy commander.
- Succession of command.
- Action of security force commander.
- Serial commander's responsibility.
- Arm and hand signals.

- Radio frequencies and call signs for
 - Control personnel.
 - Security force commander.

Fire support elements.
Reserve security elements.
Medical evacuation support.

◆ **Safety:**

Hazards of route and weather conditions.
Defensive driving.

◆ **Environmental protection:**

Spill prevention.
Transporting HAZMAT.

Appendix D

HAZARDOUS, CLASSIFIED, AND PROTECTED SENSITIVE CARGO

Section 1. Hazardous Material (HAZMAT)

D-1. Packaging, shipping, handling, and inspecting of HAZMAT is mandated by US and international laws. These laws also apply to the use of intermodal containers and container equipment. This appendix provides an overview of doctrinal guidance and tactics, techniques, and procedures that are common to Department of Defense (DOD) and other US government agencies and organizations. This appendix also applies to the selection of standard American National Standards Institute/International Standards Organization (ANSI/ISO) commercial- or military-owned intermodal containers that meet the standards for shipment of Class I explosives and other HAZMAT. (See MIL-HDBK 138 for compliance with container standards criteria.)

D-2. HAZMAT must be properly prepared and documented IAW DOD Regulation 4500.9-R, Volume II and III; TM 38-250; and other service or command regulations. Documentation must include the total HAZMAT quantity and a certification statement stating that the HAZMAT is properly classified, described, packaged, marked, and labeled. Only specially trained individuals have authority to certify HAZMAT for transportation. Contact the Installation Transportation Officer (ITO) or Movement Control Team (MCT) for assistance in determining what certification requirements apply to each HAZMAT item being prepared for shipment.

PREPARING AND DOCUMENTING HAZARDOUS MATERIALS

D-3. The following steps are a guide to use when preparing HAZMAT for shipment:

- **Step 1.** Determine proper shipping name, hazard class, United Nations Identification (UN/ID) number, and packing group from the Hazardous Materials Table in Title 49 Code of Federal Regulations (CFR), or other governing regulation. Identify any subsidiary hazard classes, also.
- **Step 2.** Determine the mode(s) of transport from origin to destination. The unit must ensure that the shipment complies with the various modal requirements. Mode of transport can affect the packaging, quantity per package, labeling, and segregation of HAZMAT. (Refer to Title 49 CFR; vessel shipments - International Maritime Dangerous Goods Code; commercial air - International Air Transport Association; or for military air - TM 38-250 (joint publication)).
- **Step 3.** Determine and select the proper packaging IAW the proper modal regulations. When selecting an authorized container, consider the quantity per package. Refer to Title 49 CFR; vessel shipments - International Maritime Dangerous Goods Code; commercial air - International Air Transport Association; or for military air - TM 38-250 (joint publication). Use can also be made of the DOD Performance Oriented Packaging PC III database to determine appropriate and certified packaging. (Contact DLA, DOSO-DH, DSN 695-4788 or (804) 379-4788, FAX X3793, to obtain access to this program.)
- **Step 4.** Packaging shall be marked IAW MIL-STD 129 and applicable modal regulations.
- **Step 5.** Select the proper labels and apply as required. Refer to the Hazardous Materials Table. Labels are not needed for fuel in vehicle fuel tanks.

- **Step 6.** Prepare packing lists. List HAZMAT packed inside containers or vehicles first. Only authorized abbreviations are permitted for HAZMAT. Refer to Title 49 CFR.
- **Step 7.** Determine segregation requirements for HAZMAT based on each mode of transport or combination thereof. Find segregation requirements in Title 49 CFR, Parts 173 through 177, and which are specific for each mode of transport.
- **Step 8.** Determine the proper placards IAW Title 49 CFR.
- **Step 9.** Load, block, and brace HAZMAT IAW with Title 49 CFR and DOD-approved specifications. Container loading diagrams for ammunition and explosive items can be obtained by contacting the US Army Defense Ammunition Center, ATTN: SMCAC-DET, Savanna, IL 61074-9639.
- **Step 10.** Use water or air commodity and special handling codes on the Organizational Equipment List/Unit Designation List (OEL/UDL).
- **Step 11.** Prepare shipping documentation. Ensure the shipping papers (Commercial Bill of Lading (CBL), DD Form 836, and so forth) contain the required entries. Required entries are proper shipping name, hazard class and division, UN/ID number, packing group, total HAZMAT metric measure with the English equivalents in parentheses, certification statement, and applicable emergency response information. See DOD 4500.9-R, Volume II for detailed documentation information.

D-4. Provide a dangerous goods declaration and certificate for each vehicle or freight item containing HAZMAT. (See DOD 4500.9-R, Volume II.)

D-5. Comply with all rules and regulations governing the shipment of HAZMAT. When in doubt about shipping or classifying any hazardous or questionable materials, contact the ITO or MCT. Failure to follow these rules can result in frustrated cargo and ultimately affect the mission. Failure to follow HAZMAT rules incurs a fine, delays shipment, hampers cargo accountability, and increases the port throughput workload and congestion. The deploying unit must ensure that:

- All ammunition and explosives are secured properly in containers and vehicles.
- Military Traffic Management Command (MTMC) issues authorization for ammunition to be in the port and aboard vessels.
- Provisions of the Department of Transportation (DOT) exemptions, which may be used for shipment are followed. (For example, vehicle fuel tanks will be no more than three-quarters full when shipping under DOT Exemption 7280. Otherwise, fuel tanks must be only one-quarter full when shipping aboard a commercial vessel that is carrying civilians in addition to military cargo.)
- Fire extinguishers, that are in racks designed expressly for them, are not removed from motor vehicles.
- Oxygen and acetylene tanks are labeled and marked with the unit identification code (UIC) and shipment unit number (SUN) and removed from the vehicle and placed on a separate pallet.
- Fuel tanks of trailer mounted equipment containing combustion engines (such as generator sets) are only 50 percent full.
- Five-gallon fuel cans, field cans, water heaters, gasoline lanterns, portable generators, blow torches, and similar equipment (in which combustibles other than diesel fuel are stored) are completely drained and cleaned before shipment. In a declared national emergency, 5-gallon cans can contain fuel.

- Battery boxes and covers are serviceable and positioned so as not to touch the terminals and to prevent arcing.
- Batteries of non-self-propelled equipment (such as generators) are disconnected and terminal ends protected from arcing and corrosion.
- When mode or other regulatory guidance requires, bulk fuel carriers are drained and purged and the proper placards affixed to them. A purge certificate should be prepared and kept available.
- Fueled vehicles shipped in closed freight containers have their battery cables disconnected and secured. Also that the following warning is affixed to the access doors: **“WARNING — MAY CONTAIN EXPLOSIVE MIXTURES WITH AIR-KEEP IGNITION SOURCES AWAY FROM OPENING.”**

NOTE: In OCONUS, HAZMAT laws and certification requirements differ from country to country. The local MCT has the information for all HAZMAT movement and certification requirements in the host country.

AMMUNITION

D-6. Ammunition shipments are usually scheduled through military ammunition ports. Designated military ammunition ports serve the strategic purpose of routinely handling shipments of ammunition. To meet deployment requirements, ammunition may be moved through a commercial port. If the unit is deployed through a commercial seaport and must carry basic load ammunition with them, the MTMC manager for the port must first be notified of the intent to ship ammunition. The unit submits the following data through the ITO/MCT early in movement planning:

- The DOD Ammunition Code.
- DOT proper shipping name.
- Total quantity.
- Number of packages.
- Total net explosive weight (NEW) in pounds.
- Weight of each package in pounds.
- Cube of each package.
- UN identification number.
- Classification code consisting of hazard class and division number followed by compatibility group letter.
- Shipment configuration (for example, vehicle upload, container, and so on). This will allow processing of DOD explosives safety waivers and Coast Guard permits.

RESPONSIBILITIES

D-7. The Joint Munitions Transportation Coordinating Activity (JMTCA) consolidates all containerized munitions movement requests for OCONUS shipment aboard common-use sealift. Also, CONUS distribution movements are identified for applicable container use by the JMTCA. In coordination with the Container Fleet Division (CFD) of MTMC, containers (commercial-and military-owned) certified by the International Maritime Dangerous Goods Code are used to satisfy movement requirements. The CFD is responsible to account for and control the Containerized Ammunition Distribution System (CADS) fleet. The CADS fleet contains the following ANSI/ISO container types:

- Restraint MILVANs.
- Commercial end opening and side opening containers.

- Half-height containers.
- Flatracks.
- Support equipment such as the Container Roll In/Roll Out Platform (CROP).

D-8. The JMTCA is responsible for determining the container type to employ for each shipment. It makes the determination based upon the physical characteristics of the munitions, operational requirements, outloading efficiency, and overall cost effectiveness. The JMTCA requests outloading comparisons from the US Army Defense Ammunition Center to assist in the analysis of all munitions load configurations. The JMTCA uses the Munitions Transportation Management System (MTMS) to consolidate all service munitions movement requirements for Single Manager Conventional Ammunition (SMCA) and Non-SMCA munitions for OCONUS. JMTCA, uses MTMC to prepare the export traffic release requests and transmits the information to the appropriate MTMC area command in order to create port call files. Combatant Commanders use data incorporated into the JMTCA ship planning/DOD Identification Code roll-up messages to influence munitions mix and its mode and theater delivery timeframe.

D-9. JMTCA is responsible to coordinate with CFD to ensure distribution actions are taken to pre-position containers by type at applicable shipping installations. This enables the JMTCA to meet initial and sustainment munitions movement requirements in support of contingency and peacetime operations.

Section 2. Classified Cargo

D-10. Classified cargo is cargo that requires protection in the interest of national security. The nature of classified cargo requires that shippers and transporters handle it in a way that it be identified, accounted for, secured, segregated, or handled in a special way to safeguard it. Detailed instructions are included in DTR 4500.9R.. Do not identify classified cargo on the outside of the shipping containers.

D-11. When transporting classified material, enclose it in two sealed containers, such as boxes or heavy wrappings. Detailed instructions for packing classified material are contained in AR 380-5. Among its implementing instructions are the following excerpts from Chapter 8, AR 380-5:

Classified information will be transmitted and transported only as specified in this Chapter 8, AR 380-5. Communications security information will be transmitted in accordance with AR 380-40. Special Access Programs material will be transmitted and transported in accordance with appendix I of AR 380-5, AR 380-381, and applicable special access program procedure guides. Commands will establish local procedures to meet the minimum requirements to minimize risk of compromise while permitting use of the most effective transmission or transportation means.

Preparation Of Material For Transmission In Envelopes Or Containers

a. When classified information is transmitted, it will be enclosed in two opaque, sealed wrappings or containers, durable enough to properly protect the material from accidental exposure and to ease in detecting tampering. The following exceptions apply:

- (1) If the classified material is an internal component of a packageable item of equipment, the outside shell or body can be considered as the inner enclosure provided it does not reveal classified information.
- (2) If the classified material is an inaccessible internal component of a bulky item of equipment, the outside or body of the item can be considered to be a sufficient enclosure provided observation of it does not reveal classified information.
- (3) If the classified material is an item or piece of equipment that is not easily packageable and the shell or body is classified, it will be concealed with an opaque covering that will hide all classified features.
- (4) Specialized shipping containers, including closed cargo transporters, can be considered the outer wrapping or cover when used.

b. Classified material will be prepared for shipment, packaged, and sealed in ways that minimize the risk of accidental exposure or undetected deliberate compromise.

Consignor/consignee responsibility for shipment of bulky material

The consignor of a bulk shipment will—

- a. Select a carrier that will provide a single line service from the point of origin to destination, when such a service is available.
- b. Ship packages weighing less than 200 pounds in closed vehicles only.

- c. Notify the consignees and military transshipping activities of the nature of the shipment, including level of classification, the means of shipment, the serial number of the seals, if used, and the anticipated time and date of arrival by separate communication, at least 24 hours in advance of arrival of the shipment.
- d. Advise the first military transshipping activity that, in the event the material does not move on the conveyance originally anticipated, the transshipping activity should advise the consignee with information of the firm date and estimated time of arrival. Upon receipt of the advance notice of a shipment of classified material, consignees and transshipping activities will take appropriate steps to receive the classified shipment and to protect it upon arrival.
- e. Annotate the bills of lading to require the carrier to notify the consignor immediately, by the fastest means, if the shipment is unduly delayed in route. Such annotations will not under any circumstances disclose the classified nature of the commodity. When seals are used, annotate substantially as follows: "DO NOT BREAK SEALS EXCEPT IN EMERGENCY OR UPON AUTHORITY OF CONSIGNOR OR CONSIGNEE. IF BROKEN, APPLY CARRIER'S SEALS AS SOON AS POSSIBLE AND IMMEDIATELY NOTIFY CONSIGNOR AND CONSIGNEE."
- f. Require the consignee to advise the consignor of any shipment not received more than 48 hours after the estimated time of arrival furnished by the consignor or the transshipping activity. Upon receipt of such notice, the consignor will immediately trace the shipment. If there is evidence that the classified material was subjected to compromise, the procedures set forth in chapter 10 of this regulation for reporting compromises will apply.

D-12. In addition to the provisions of AR 380-5, the following considerations are pertinent for classified material:

- Packaging material must be strong and durable enough to provide security protection while in transit, to keep items from breaking out of the container, and to help detect any tampering with the container. The wrappings must conceal all classified characteristics.
- Use closed and locked vehicles, compartments, or cars for shipment of classified material except when the appropriate authority authorizes another method.
- When classified material is transported, it will not be stored in any detachable storage compartment such as automobile trailers, luggage racks, aircraft travel pods, or drop tanks.
- When transporting classified material across international borders, arrangements must be made to ensure that customs, border, or other inspectors (either US or foreign) do not open the material.
- Place a serial-numbered seal on doors of containers, vehicles, or compartments that contain classified or protected cargo. The serial number must be entered on the shipment unit packing list and on all shipping documents.
- The unit authorizing the transport of the classified equipment must notify the ITO/MCT and appropriate carrier in advance.
- Shipping classified material by rail may require commanders to provide guards or escorts.

D-13. When traveling by motor convoy, escorts must ensure constant surveillance of classified material. Classified material must stay within the escort's personal possession and observation at all times. Larger pieces of secret shipments, such as missiles, may require outside storage. If so, take special protective measures to include constant and continuous surveillance by at least one or more escorts in the area.

Section 3. Sensitive Cargo

D-14. Sensitive cargo is cargo that could threaten public safety if compromised. Sensitive cargo must be properly secured and identified to port personnel so sufficient security can be provided. Do not identify security cargo on the outside of the shipping containers. Detailed instructions are included in DTR 4500.9R..

D-15. For sensitive cargo, units must adhere to the following:

- Remove crew-served weapons from vehicles. Place them in containers that are sealed and secured with an approved device.
- Ensure packaging material is strong and durable enough to provide security protection while in transit.
- Secure containers, vehicles, or compartments with an appropriate locking device as directed by the installation security officer. Also, place a serial-numbered seal on the door. Enter the serial number on the shipment unit packing list.
- Identify sensitive items in the commodity code on the unit's OEL/UDL.
- Eliminate indications of sensitive items from outside of the container, vehicle, or compartment that it contains sensitive items. Identify this fact on the unit's OEL/UDL.
- Provide guards or escorts when shipping sensitive material by rail.

Appendix E

CONTAINERIZATION, VEHICLE PREPARATION AND BLOCKING, BRACING, PACKAGING, CRATING AND TIEDOWN MATERIAL

RESPONSIBILITIES

It is the commander's responsibility to ensure that all equipment is ready for deployment. This is a time consuming process because a myriad of requirements must be addressed, among them the type of equipment being moved, to where and how it is being moved.

The installation is responsible to procure and store blocking, bracing, packing, crating, and tie-down (BBPCT) material. Vessel captains provide tie-down chains for their ships. The Air Force normally provides tie-down chains for equipment moved on its aircraft. Therefore, it is imperative that the unit determine its needs, and convey them via chain of command to the appropriate support agency.

REFERENCE USE AND ACQUISITION

The unit should refer to FM 38-701 for proper packaging procedures. FM 38-701 (hard copy) can be acquired through normal distribution channels. The manual is also available electronically and can be downloaded from <http://www.adtdl.army.mil/cgi-bin/atdl.dll/fm/38-701/toc.htm>.

Proper procedures concerning deploying vehicles and equipment via different modes of transport are found in the Military Traffic Management Command Transportation Engineering Agency (MTMCTEA) publications listed below.

- MTMCTEA Pamphlet 55-19 (Rail)
- MTMCTEA Reference 55-20 (Truck)
- MTMCTEA Reference 55-21 (Helicopter)
- MTMCTEA Reference 55-22 (Lifting and Lashing)
- MTMCTEA Reference 55-23 (Containerization)
- MTMCTEA Reference 55-24 (Air)

The MTMCTEA 55-series is available online at <http://www.tea.army.mil/dpe/field.htm>. (Password is required.)

Hard copies of FM 38-701 and pamphlets can be ordered by using the form on the next page. (This form can also be found in the front of MTMCTEA Ref 55-24).

MTMCTEA REF 55-24

Sample Order Form

Full military name and address of requesting organization:

Name and phone numbers (voice and FAX) of point of contact:

Could you use a CD version of the pamphlets *instead of* hard copy? yes no

(Note: a CD version is not yet available but is in the planning stages.)

Please fill in quantity of desired MTMCTEA pamphlets:

Qty

Pamphlet 55-19, *Tiedown Handbook for Rail Movements* _____
 Reference 55-20, *Tiedown Handbook for Truck Movements* _____
 Reference 55-21, *Lifting and Tiedown of US Military Helicopters* _____
 Reference 55-22, *Marine Lifting and Lashing Handbook* _____
 Reference 55-23, *Containerization of Military Vehicles* _____
 Reference 55-24, *Vehicle Preparation Handbook for Fixed Wing Air Movements* _____
 Reference 70-1, *Transportability & Deployability for Better Strategic Mobility* _____
 Reference 700-2, *Logistics Handbook for Strategic Mobility Planning* _____
 Reference 700-5, *Deployment Planning Guide* _____

Please state intended use and/or distribution plan of requested pamphlets (to help us justify cost):

FAX to DSN 927-4320 or (757) 599-1561 or mail the form to the address below:

Director,
 MTMCTEA
 720 Thimble Shoals Boulevard, Suite 130
 Newport News, VA 23606-2574

Appendix F

Transportation Coordinators-Automated Information for Movements System II (TC-AIMS II) Functionality

F-1. The Transportation Coordinators - Automated Information for Movements System II (TC-AIMS II) is the result of a need identified during Desert Shield / Storm to have the transportation information systems of each Department of Defense (DOD) service component be able to communicate with one another.

APPLICATION

F-2. TC-AIMS II satisfies the Army's unit movements requirement by providing support in two broad functional areas: unit movement (at the company, battalion, and brigade level) and installation transportation management (at the installation transportation office / movement control team level).

Unit Move

F-3. TC-AIMS II includes automated support to assist unit commanders to create, maintain, manage, and update unit equipment, personnel, and movement information databases. It facilitates planning and execution of unit movements. It incorporates the mechanism for identifying assets and requirements for force deployment on deliberate and crisis action planning. TC-AIMS II provides tools to support data management; planning and execution of deployments; and unit personnel and equipment management. Asset tracking (i.e. tracking cargo and equipment) is accomplished through the use of automatic identification technology (AIT). Specifically, through the use of radio frequency tags and associated interrogator/readers at key points along a predetermined travel route, (e.g. marshaling area, staging area, port of embarkation, port of debarkation). Movement planning starts with the establishment of unit move requirements and ends with the arrival of personnel, materials, and supplies at a destination point. The planning function includes preparation and execution of convoys (assigning, loading, staging, moving, controlling, coordinating, tracking, etc.). In addition, the unit move function supports rail, air, and ship loading.

ITO/MCT

F-4. TC-AIMS II provides capabilities that support movement requirements, procure commercial carrier support, capture historical shipment information, and support cargo/personnel moves during day to day operations. These provide automated support capabilities to the movement coordinator for receiving, documenting, coordinating, managing, and transporting cargo and passengers. TC-AIMS II also includes automated support tools to assist in passing data to other systems, as required.

Functional Structure

F-5. TC-AIMS II consists of four main unit movement modules. They are Asset Management, Movement Planning, Movement Coordination, and Movement Execution.

- **Asset Management:** Provides DOD units the capability to maintain personnel readiness data (licenses, equipment qualifications, medical, and immunization status, etc.), equipment, supplies, deployment support equipment, and create reports.
- **Movement Planning:** Provides DOD units the capability to receive movement requirements, analyze the requirements, and create tailored movement plans.
- **Movement Coordination:** Provides DOD units the capability to request transportation assets and coordinate land, sea, air freight, and passenger movement requirements from origin to destination. Allows user to prioritize loads (high, medium, or low) based on mission requirements (e.g., the equipment to set up a rapid refuel point in support of an aviation battalion would warrant a higher priority than a full field kitchen. The logic being those soldiers can eat Meal, Ready-To-Eat (MRE) while awaiting the field kitchen to arrive, however, helicopters can not fly without fuel).
- **Movement Execution:** Upon receipt of a movement order, TC-AIMS II provides DOD units the capability to carry out the segments and legs developed in the movement plan in a logical order that best suits mission accomplishment. TC-AIMS II gives the user the ability to track unit move information, and provides the capability to perform some tasks that are resident in other parts. TC-AIMS II also gives the ability to track assets via AIT devices.

UTILIZATION BY USER LEVEL

Company

F-6. The company unit movement officer (UMO) is the key person in a successful movement utilizing TC-AIMS II. Figure F-1 depicts the TC-AIMS II business processes for the company UMO.

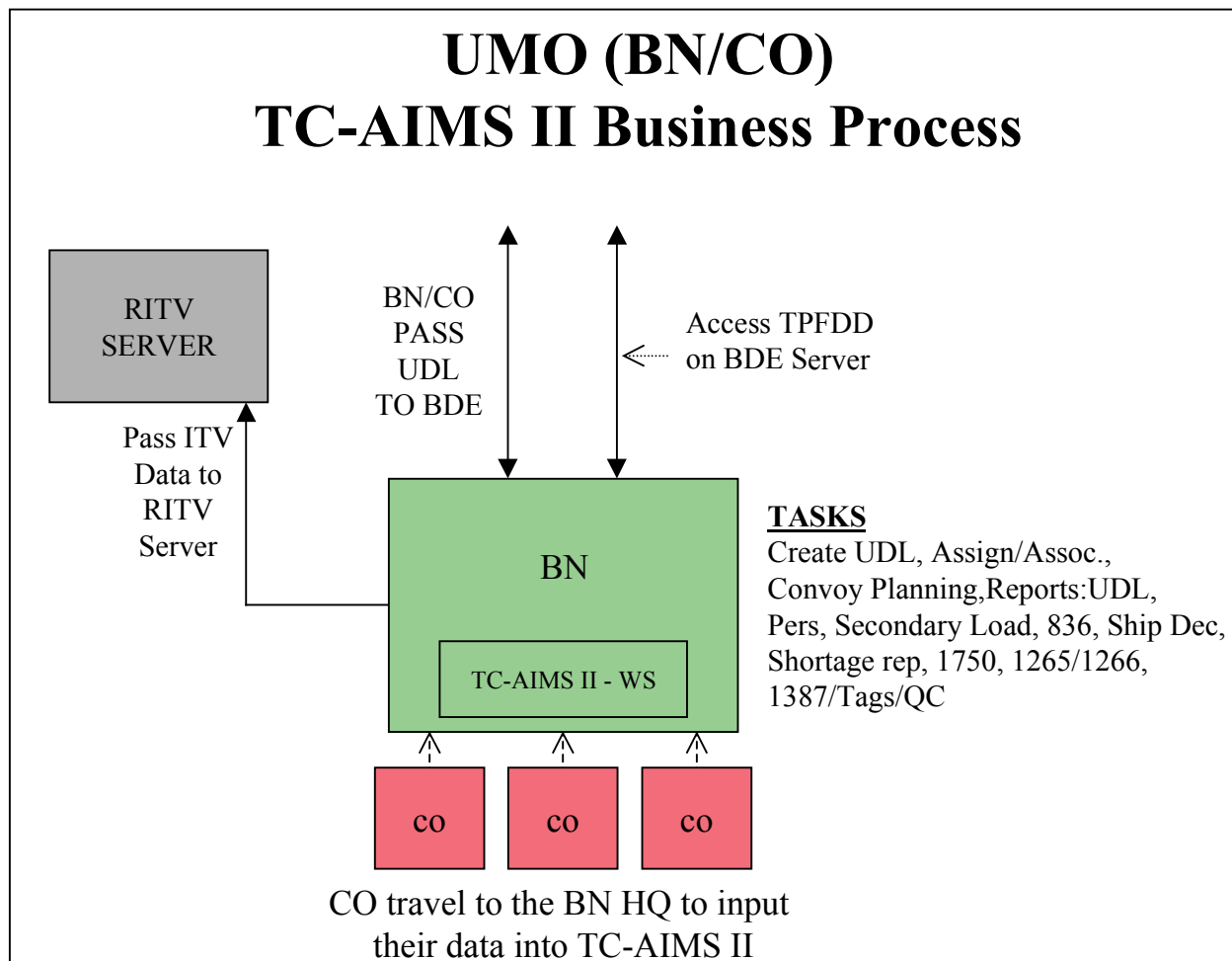


Figure F-1. TC-AIMS II Business Process for the Company and Battalion UMO

F-7. The responsibilities include but are not limited to:

- Create, maintain, manage, and update unit equipment, personnel, and deployment information databases.
- The UMO should import equipment and personnel data from the appropriate databases. The data should be reviewed for accuracy. Corrections and updates can be made in TC-AIMS II for local use; however, the changes remain resident. Because TC-AIMS II does not have a two way communication capability to source databases, the UMO should contact battalion headquarters with the changes that need to be made in the source databases (e.g. Standard Installation/Division Personnel System (SIDPERS), Transportation Coordinators-Automated Command and Control Information System (TC-ACCIS)).

- Plan organic movements.
 - ❑ Movements such as field exercises that occur on a scheduled basis each year can be stored in TC-AIMS II for use whenever the movement occurs.
- Develop plans over time for known exercises and deployment scenarios (deliberate planning).
 - ❑ The deliberate planning process defines a deployment package for specific equipment and personnel. For example, “Generator A” will be loaded on “Trailer A” and hitched to “Truck A” which in turn will be loaded with duffel bags. “Truck A” will have “PFC Jones” assigned as the driver, and “SGT Smith” as the alternate driver.
 - ❑ Deliberate planning can be done with or without a Time Phased Force Deployment Data (TPFDD).
- Develop plans immediately for emergency deployments and war (crisis action planning)
 - ❑ The crisis planning process defines a deployment package in response to an immediate threat that has not been prepared for in the TPFDD creation process e.g. crisis action planning could be used for disaster preparedness, which varies by geographic region.
- Prepare and execute convoys (assign, load, stage, move, control, coordinate, track etc.).

F-8. The company UMO plan creates a unit deployment list (UDL) from the organizational equipment list (OEL) based on information supplied either through a TPFDD or from the battalion commander. The UDL is forwarded to the battalion UMO for further action.

F-9. The Company UMO is an officer or an NCO E-6 or above.

Battalion

F-10. The battalion UMO is the movement administrator for the entire battalion and the point of contact for company UMOs. Figure F-1 depicts the TC-AIMS II business processes for the battalion UMO. The responsibilities include but are not limited to:

- Consolidating the company movement plans and developing them into movement plans for the battalion.
- Auditing the company’s asset management sections for accuracy.
- Forwarding battalion movement plans to brigade for further consolidation.

F-11. The battalion plan is a UDL for the battalion to include the headquarters company. It is built by consolidating the company UDLs to match the requirements of a TPFDD or the battalion commander.

F-12. TC-AIMS II has the capability to tailor movements and the units participating in those movements. Accordingly, battalion movements can be constructed for the entire battalion or for slice elements dependent upon the mission requirement.

Brigade

F-13. At the brigade level, the title of the movement officer changes to Brigade Movement Coordinator (BMC). The change is to more correctly identify the function of the position due to additional responsibilities at the brigade level. The BMC is the liaison between the UMO (at battalion and company) and the ITO in continental United States locations, the MCT in outside continental United States locations; and in both locations, the Unit Movement Coordinator (UMC). Figure F-2 depicts the TC-AIMS II business processes for the BDE BMC.

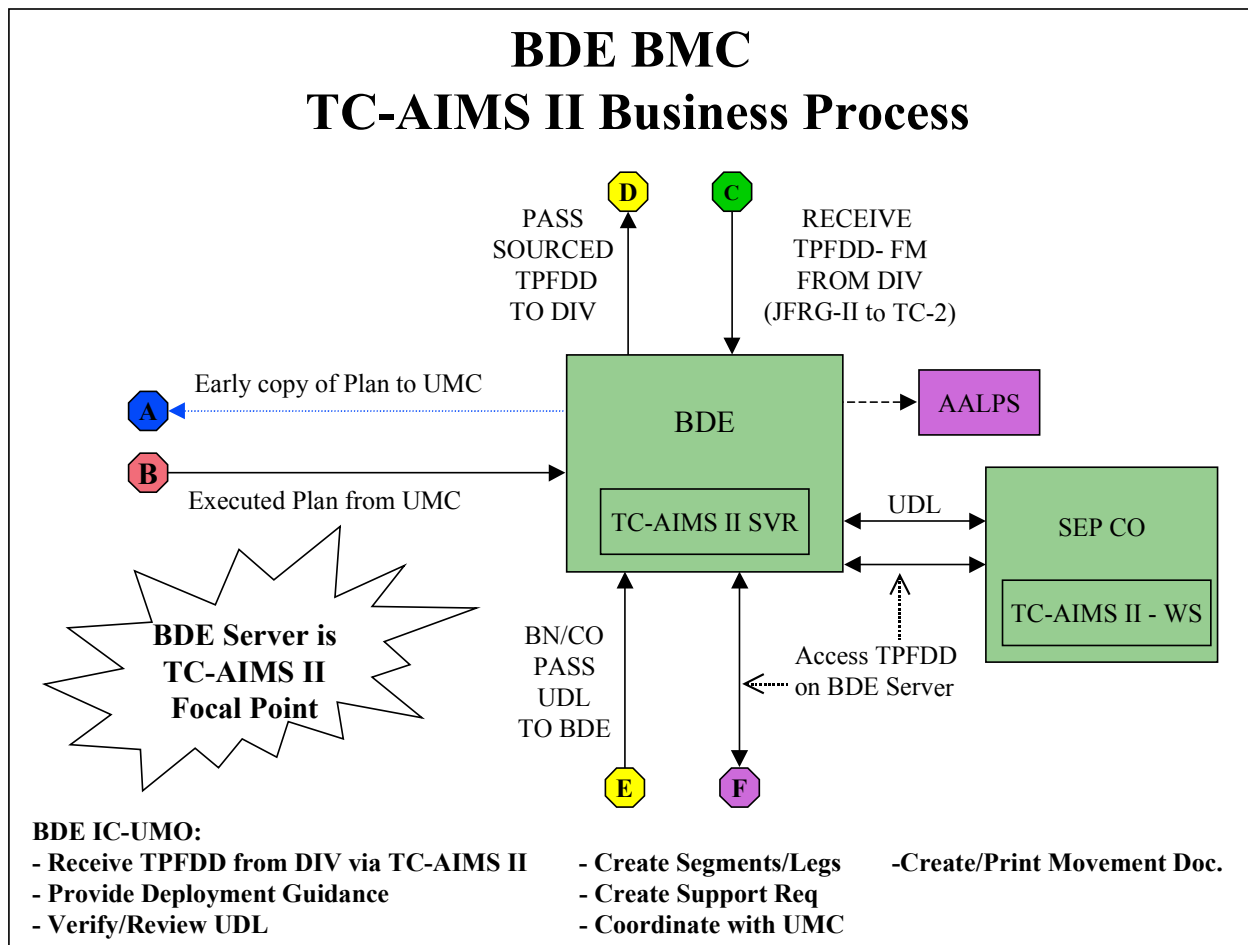


Figure F-2. TC-AIMS II Business Process for the Brigade Movement Coordinator

F-14. The responsibilities include but are not limited to:

- Consolidating the battalion movement plans and developing them into movement plans for the brigade.
- Inserting movement data into the movement plan (e.g. train, convoy, etc).
- Forwarding brigade movement plans to the UMC.

- Coordinating the movement of personnel and equipment beyond the capability of organic assets with the UMC.
- Consolidating unit support requests for commercial transportation and providing them to the UMC.
- Obtaining unit convoy clearances and special hauling permits from the UMC.

UMC

F-15. At the installation level, the UMC coordinates strategic movements and assists units in developing and executing unit movement plans. Figure F-3 depicts the TC-AIMS II business processes for the UMC.

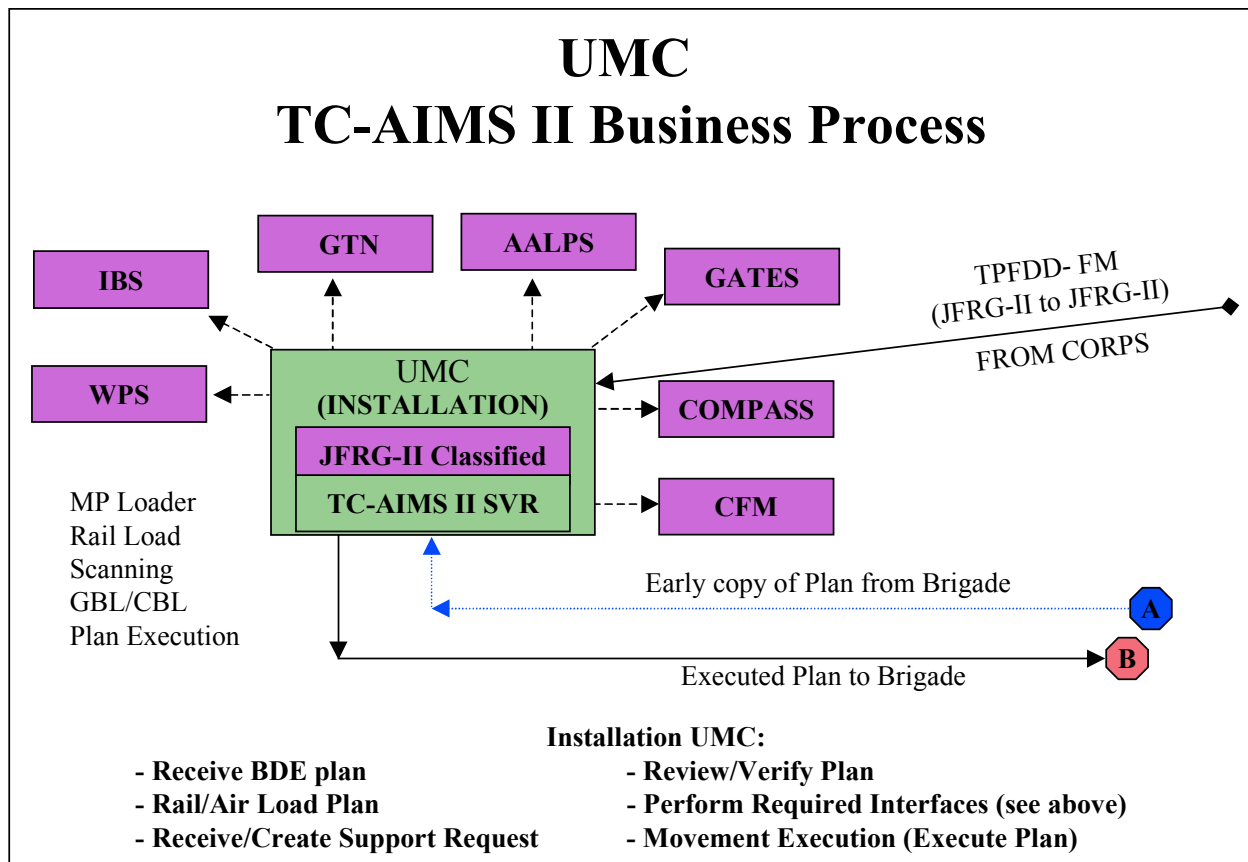


Figure F-3. TC-AIMS II Business Process for the UMC

F-16. The UMC responsibilities include but are not limited to:

- Providing movement guidance to all units moving from the installation.
- Processing convoy clearances and special hauling permits to meet unit requirements.
- Advising the unit on preparing movement documentation.

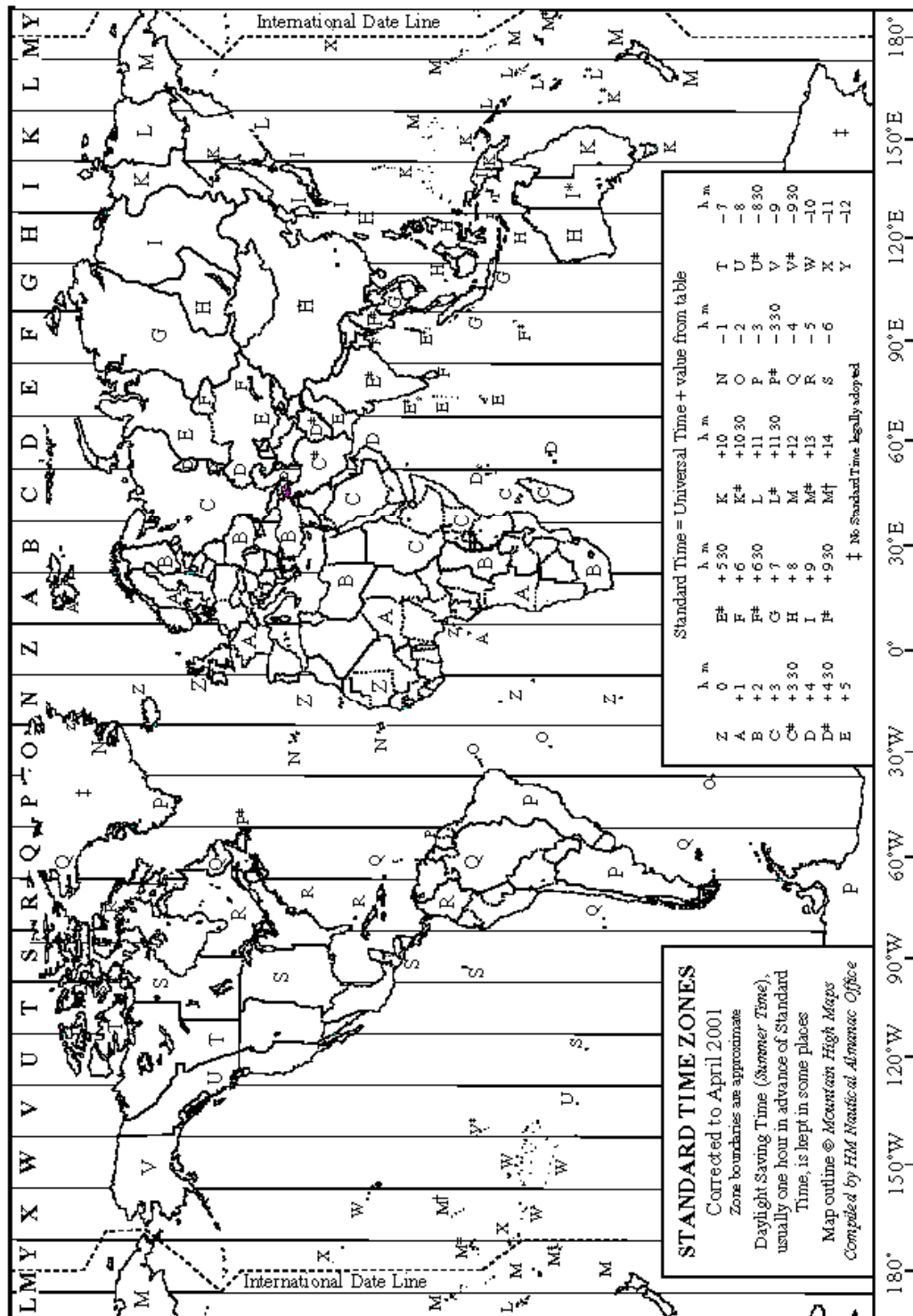
- Verifying the number of ships and aircraft (determined by MTMC) required by each unit and assisting in designating loading sites and coordinating times to start and complete unit loading.
- Assisting units in identifying and obtaining blocking, bracing, packing, crating, and tie-down materials.
- Coordinating unit materiel handling equipment requirements with commercial and military MHE sources.
- Coordinating movement documents for commercial lift of unit personnel to include enroute support.
- Ensuring unit equipment is properly marked prior to movement by any mode.
- Supporting unit movement at railheads and airfields.
- Serving as the primary point of contact for special assignment airlift mission (SAAM) and exercise airlift. Coordinating airlift requests for active and reserve component units.
- Maintaining and managing containers, and 463L pallet and cargo net allocations.

TC-AIMS II IN THE FUTURE

F-17. Examination and planning is on-going to develop additional TC-AIMS II capabilities based on jointly developed requirements.

APPENDIX G

WORLD MAP OF TIME ZONES



Appendix H

DEPLOYMENT BINDERS

In addition to movement SOPs, some units maintain a movement binder to use as a quick reference when preparing for movement operations.

CONTENTS

The recommended contents of a movement binder are as follows:

- Appointment orders and training certificates for Unit Movement Officers and alternates, load teams, and personnel qualified to certify hazardous material.
- A recall roster and instructions.
- A listing of required references.
- A list of major equipment shortage items.
- A list of blocking, bracing, and packing materials, as well as actions required to obtain materials not already on-hand.
- A list of supplies by support activity, coordination requirements (lists of personnel, transporting locations, and materials-handling equipment), and prepared requisitions.
- Coordination requirements for plan execution and a list of supporting agencies and POCs.
- A copy of the SOP and extracts from the unit deployment plan detailing initial actions to be taken during a deployment in time sequence.
- A current copy of the Organization Equipment List.
- Copies of all load cards and container packing lists.
- Prepared copies of transportation requests, convoy movement requests and special hauling permits.
- Strip maps for each route of march the unit will take (see annex 2 to appendix C for convoy briefing outline).
- Advance party composition and instructions.
- Examples of forms required for personnel support during deployment (e.g., Adjutant General, Judge Advocate General, medical).
- Transportation requirements (such as trucks, buses) that are beyond the unit's organic transport capability. This includes POCs and preplanned coordination channels for obtaining needed transport capability.
- Rear detachment and family support group operations plans.
- Other unit checklists or handbooks developed by the unit to assist in deployment planning and execution.
- Contact telephone numbers during off duty hours for service organizations supporting deployment.

Appendix I

TRANSPORTATION RELATED AUTOMATED INFORMATION SYSTEMS

The following list contains the names of selected transportation related Automated Information Systems (AIS) and a brief description of each system.

AUTOMATED AIR LOAD PLANNING SYSTEM (AALPS)

I-1. AALPS System Description: AALPS allows military air load planners to quickly and efficiently estimate airlift requirements, plan force packages, and modify aircraft loads. AALPS rapidly provides estimates of airlift requirements for a given list of equipment and passengers and takes into account the unique loading requirements for all delivery methods used on all U.S. military and Civil Reserve Air Fleet cargo aircraft. AALPS allows users to create and save contingency force packages in advance of a mission. This saves time and avoids input errors during deployment. The system has the capability to print approved load plans as well as various load and movement reports.

GLOBAL FREIGHT MANAGEMENT SYSTEM - ELECTRONIC TRANSPORTATION ACQUISITION (GFM-ETA)

I-2. GFM-ETA System Description: GFM is a DOD freight traffic management information system designed to provide a centralized database of master reference files, freight tenders, domestic route order requests, bills of lading shipment information, and carrier performance data. The GFM interface provides timely carrier costing data to the installation transportation officer for bill of lading shipments.

CARGO MOVEMENT OPERATION SYSTEM (CMOS)

I-3. CMOS System Description: CMOS is a combat support system that automates and streamlines installation level cargo movement processes for peacetime, deployment, and contingency cargo. Workstations in installation transportation officer functional areas support one-time data capture for the preparation of documentation for all modes of shipment. The specific functional areas supported are the receipt, preparation, and movement of cargo; the reporting of movement for in-transit visibility (ITV), and military airlift passenger travel. The electronic reporting of cargo movement makes CMOS a vital component of the logistics community's effort to provide in-transit asset visibility.

COMPUTERIZED MOVEMENT PLANNING AND STATUS SYSTEM (COMPASS)

I-4. COMPASS System Description: The COMPASS system is an Army command and control support system that uses computer technology with multiple system interfaces that facilitate collection and maintenance of unit movement data (UMD) to support planning, strategic mobility analysis, movement execution, and command and control for mobilization and deployment purposes. The Army uses the COMPASS to satisfy combatant commanders, Army and Joint Staff UMD information requirements for deliberate and crisis action planning; strategic mobility analysis, and

mobilization and deployment movement execution. The COMPASS-processed UMD is utilized within the Joint Operations Planning and Execution System (JOPES).

DEPARTMENT OF THE ARMY MOVEMENT MANAGEMENT SYSTEM -

I-5. Department of the Army Movements Management System (DAMMS) provides visibility of import, export, and intra-theater cargo movements to managers within the theater. Mode managers are provided asset accountability and asset visibility. Data is provided to movement managers, mode operators, and materiel managers to expedite the onward movement of cargo and personnel. DAMMS allows the user to create main supply routes (MSRs) and to display map data in support of convoy planning and highway scheduling. Information is shared with TC-AIMS II.

GLOBAL AIR TRANSPORTATION EXECUTION SYSTEM (GATES)

I-6. GATES System Description: GATES provides US Air Force Air Mobility Command, the Department of Defense (DOD), and commercial partners with automated functionality to process and track cargo and passenger information, support management of resources, support scheduling and forecasting, provide logistical support information, generate standard and ad hoc reports, and provide message routing and delivery service for virtually all airlift data. Intended users of GATES include, but are not limited to, Tanker Airlift Control Center (TACC), Airlift Clearance Authorities (ACAs), Service Airlift Validators, Passenger Reservation Centers, Military Transportation Offices (MTO), commercial reservation systems users, and various work centers such as the Air Terminal Operations Center. Planned GATES operation sites are HQ Air Mobility Command and the aerial ports.

GLOBAL TRANSPORTATION NETWORK (GTN)

I-7. GTN System Description: GTN is the USTRANSCOM command and control AIS that provides DOD and commercial transportation users and providers, a system of command, control and in-transit visibility (ITV) capabilities. GTN collects and integrates transportation data from selected transportation systems. The resulting data is provided to the Joint Chiefs of Staff, the combatant commanders, the USTRANSCOM component commands, and to DOD customers to support transportation planning and decision making during peacetime and wartime. GTN supports planning, providing, and control of the common user airlift, surface lift, and terminal services that deploy and DOD global forces during peacetime and wartime. Specifically, GTN focuses on providing USTRANSCOM with the information necessary for visibility, planning, command and control, intelligence, and reporting.

INTEGRATED BOOKING SYSTEM (IBS)

I-8. IBS System Description: IBS is the lead execution system of the Defense Transportation System for the booking of international surface cargo during both peacetime and wartime operations. The system supports traffic management within MTMC, the greatest percentage of which is booking non-unit peacetime cargo. IBS must also satisfy the MTMC mission to execute the plans developed in deliberate planning for international cargo. In addition, the system is responsible for booking cargo during contingency operations. IBS must be responsive to requirements of commodity managers and war planners requiring continuous access to international surface cargo movement. IBS is fielded to both CONUS and OCONUS sites and exchanges data with Worldwide Port System and other systems.

INTEGRATED COMPUTERIZED DEPLOYMENT SYSTEM (ICODES)

I-9. ICODES System Description: The ICODES system is a ship load planning software application that utilizes artificial intelligence (AI) principles and techniques to assist embarkation specialists in the rapid development of cargo stow-plans. It includes expert agents with knowledge in specific domains (e.g., hazardous material handling, trim and stability, ramps, cranes, and internal access paths) to evaluate and propose loading alternatives and recommendations. ICODES integrates with information management and documentation systems such as WPS, TCAIMS II, and IBS, to receive cargo lists and send completed load plans.

JOINT FORCE REQUIREMENTS GENERATOR II (JFRG II)

I-10. JFRG II System Description: JFRG II is a computer based planning tool designed to support the Services in the development of both deliberate and crisis action plans. It supports tactical and administrative planning by providing the following capabilities: Import of Service type unit characteristic data, rapid force list creation, lift analysis, time phased force deployment data development and manipulation, and declassifies the import and export of data to the Joint Operation Planning and Execution System (JOPES).

MOBILIZATION CONTROL (MOBCON)

I-11. The mobilization movement control (MOBCON) program is responsible for highway regulation within CONUS. This is a HQDA/National Guard Bureau proponentcy. MOBCON assigns the responsibility for CONUS highway movements to a Defense Movement Coordinator (DMC) in the state movement control center (SMCC) of each state. The DMC is the convoy approval authority for ***all active and reserve component forces*** highway movements. Active component requests for convoy clearance flow from the unit to the UMC at each Army installation. Each installation forwards each request to the DMC in the state where the convoy begins. Reserve components forward each request *directly* to the DMC. The DMC provides the moving unit with a convoy movement order which reserves road space for the unit. It also provides a detailed movement schedule and includes information on the route. In addition to receiving, scheduling, and deconflicting convoys, the state DMCs also interact with state transportation departments and law enforcement agencies to receive current information on road construction, traffic congestion, accidents, road closings, and weather conditions.

I-12. Due to the DMC's close relationship to civil authorities in each state, the DMC certifies movements important or essential to National Defense. The DMC also issues clearance for units needing special permits for oversize or overweight loads. The DMC serves as the DOD representative to the state department of transportation for emergency highway traffic regulation and provides aid to units moving during mobilization and deployment. The DMCs transmit these data to technical support personnel at Oak Ridge National Laboratories in Tennessee, that enter them into their data base. This makes the information readily available to all state DMCs.

TRANSPORTATION COORDINATORS' - AUTOMATED COMMAND AND CONTROL INFORMATION SYSTEM (TC-ACCIS)

I-13. TC-ACCIS automates the transportation functions of unit movement planning, execution, ITO. It provides accurate and timely movement information to the Army and joint deployment community for the deployment of active and reserve component units. When TC-AIMS II is fielded, it will replace TC-ACCIS.

TRANSPORTATION COORDINATORS' - AUTOMATED INFORMATION FOR MOVEMENTS SYSTEM II (TC-AIMS II)

I-14. TC-AIMS II is the single DOD system supporting all unit and installation deployments, redeployments, and retrograde operational requirements. It provides support during all stages of force projection operations. The TC-AIMS II system corrects the joint problem of each DOD component having a non-integrated "stovepipe" transportation system. The TC-AIMS II design incorporates the best parts of each Service's transportation system and maintains the unique needs of each Service to create a joint transportation system.

I-15. TC-AIMS II interfaces with personnel, supply, and ammunition systems; CONUS movement systems, strategic lift systems, theater movement systems, and JOPES feeder systems. TC-AIMS II interfaces with Army and some joint transportation systems.

I-16. TC-AIMS II supports daily transportation operations and provides enhancements to the unit movement processes. It will build organization equipment lists and unit deployment lists by sharing data with standard Service systems.

I-17. TC-AIMS II is designed to be a system for UMOs, planners, movement controllers, and transportation operators at all levels. Functions include planning convoys, requesting convoy clearances, conducting load planning, and managing mode operations. Through interface with other systems, TC-AIMS II provides information to enable ITV and support to GTN.

WORLDWIDE PORT SYSTEM (WPS)

I-18. WPS System Description: WPS is an AIS designed to support the function of cargo documentation, accountability and management at common user ocean terminals. WPS supports the operation of common user water terminal worldwide, during peacetime, wartime, and contingency operations.

Appendix J

DEPLOYMENT TRAINING

Deployment planning and preparation is a critical unit level activity. At the battalion and brigade level, staff proponenty for movements normally resides with the S4. Battalions and companies, depending on local regulations or standard operating procedures (SOPs), normally require a number of soldiers be appointed and trained in unit movement operations, hazardous material (HAZMAT) certification, aircraft and rail loading, and air load planning. These personnel need to be trained. There are several courses either required or recommended that support the conduct of unit movement operations. Some of the courses are resident, but many are available online as computer-based training (CBT). Some of the more important ones are detailed in this appendix.

UNIT MOVEMENT OFFICER DEPLOYMENT PLANNING COURSE (UMODPC)

J-1. The purpose of the UMODPC is to serve as both an orientation tool and a refresher tool. As an orientation tool, this course introduces critical transportation functions and responsibilities to personnel who do not have a transportation background. The target audience is personnel serving in deploying units or in units that support deployments. Examples include leaders and personnel assigned as a Unit Movement Officer (UMO), S3/G3 Staff, Installation Staff or other movement positions. As a refresher tool, logisticians can use this course to review strategic, operational and tactical transportation operations.

- The UMODPC is offered as a resident course at Ft. Eustis and Ft. McCoy. It has been offered at several other installations. Check with your training officer for resident offerings.
- Fort Eustis class schedules can be found at The Army Training Requirements and Resources System (ATRRS) at www.atrrs.army.mil. Click on course catalog section, enter Unit Movement Officer Deployment Planning in the course block and enter 551 in school code block.
- The UMODPC is also online. You must set up a student account to take the course online. The steps to set up an account are at <http://www.transchool.eustis.army.mil/training/web/>.

NOTE: Completion of the online course does not result in certification. It is for refresher and familiarization only.

AIR DEPLOYMENT PLANNING COURSE (ADPC)

J-2. The Air Deployment Planning Course instructs soldiers in air movements and qualifies them to sign Air Force load plans. (The plans still have to be approved by the USAF loadmaster.)

- The ADPC is offered as a resident course at Ft. Eustis. Check with your training officer for resident offering dates.
- Similar courses are taught at:
 - 82nd Airborne Division, Advanced Airborne School, Ft Bragg, NC.
 - 101st Airborne Division (Air Assault) Strategic Deployability School, Ft Campbell, KY.

- Units should contact their DTO or ITO as appropriate for more information on this course and the correct channels for requesting course attendance. It may also be possible to arrange for a training team to present instruction on-site.

TRANSPORTATION COORDINATORS AUTOMATED INFORMATION FOR MOVEMENTS SYSTEM II (TC-AIMS II)

J-3. To provide selected personnel with a working knowledge of how TC-AIMS II, an information management and data communication system, automates unit and installation Transportation Coordinators (TC) functions. It assists unit and installation personnel in preparing for and expediting unit movements and supporting unit actions. Under TC AIMS II, unit movement, installation transportation, and load planning functionality shall be accessible from a single client platform utilizing a LAN/WAN and microcomputers at the unit/installation level. Processing, tracking and reporting of data is available to decision makers at various command levels.

- Successful completion of practical and group exercises are required to pass this course. Therefore, TC-AIMS II is only offered as a resident course at Ft. Eustis. Work is in progress to migrate the course to a web based environment.

HAZMAT CERTIFICATION TRAINING

J-4. Hazardous cargo certifiers must be trained by a DOD approved school, or by DOD approved instructors at the unit location, on applicable regulations for all modes within the past 24 months. These personnel must also receive refresher training every two years in order to continue to certify shipments of hazardous materials for transportation.

J-5. The certification course provides training in the use of regulatory documents for the transportation of hazardous materials. The documents include those that regulate domestic commercial shipments, Code of Federal Regulations Title 49 (CFR 49); international air shipments, International Air Transport Association (IATA) and International Civil Aviation Organization (ICAO); international water shipments, International Maritime Dangerous Goods Code (IMDG); and military air shipments, AFJMAN 24-204. Areas of particular study include classification, shipping papers, marking and labeling, placarding, compatibility, as well as containers authorized for packaging of hazardous materials. The certification training is offered at the following locations:

- The Defense Packaging of Hazardous Materials for Transportation, (Course 8B-F7, Resident and On-Site)
School of Military Packaging Technology
Aberdeen Proving Ground, Maryland 21005-5001.
Telephone DSN 298-2254/5185 or commercial (410) 278-2254/5185.
The Web address is <http://smpt.apg.army.mil/DESC/8B-F7.htm>
- Transportation of Hazardous Materials (Course L3AZR2T000 005, Resident or L4AZT2T000 005, On-Site)
Lackland AFB, Texas 78236.
Telephone DSN 473-4917 or commercial (210) 671-4917.
The web address is <http://www.lackland.af.mil/345TRANS/>

- Transportation of Hazardous Materials (Course A-822-0012)
Naval Supply Corps School
Athens, Georgia 30606.
Telephone DSN 588-7240 or commercial (706) 354-7240.
The web address is http://www.nscs.com/training/courses/desc_hazmat.asp

HAZARDOUS CARGO HANDLERS, PACKERS AND VEHICLE DRIVERS

J-6. HAZMAT training is required for personnel who offer, accept, handle, prepare, mark, placard, or label HAZMAT packages; prepare HAZMAT shipping papers; or operate or crew any transport mode carrying HAZMAT.

J-7. The training for these personnel includes:

- General awareness and familiarization with hazard regulations and requirements.
- Function-specific training based on the individual's job.
- Safety training on HAZMAT personal protection measures.
- Methods and procedures for avoiding HAZMAT accidents.
- Drivers training including applicable safety regulation requirements.

J-8. Training instruction can be locally conducted and tailored to meet the needs of the unit based on the tasks performed. It is also available through contractors, commercial training kits, and through the schools listed above for certification training. **DOD personnel must be trained and pass a written test every two years (DOD 4500.9-R chapter 204 section E).**

NOTE: The following is not a certifying course.

This course is designed to meet the needs of personnel dealing with hazardous material, and who only require the familiarization and safety training described in 49 Code of Federal Regulations (CFR), Section 172.704. Personnel who meet the definition of a HAZMAT employee in the 49 CFR (Section 171.8) or who are involved in or effect the transportation of hazardous materials should take this course.

- Technical Transportation of Hazardous Materials (Course AMMO-62, Resident or On-Site)
Defense Ammunition Center, McAlester, OK, 74501-9053.
- Telephone DSN 956-8595/8961 or commercial (918) 420-8595/8961.
The Web address is http://www.dac.army.mil/as/p_67.html

UNIT LOADING TEAMS

J-9. Units are required to have an appropriate number of personnel trained in vehicle preparation and aircraft and rail loading/unloading techniques. Training can be arranged through the installation UMC or DTO. Specific skills required include:

- Executing vehicle load plans.
- Preparing vehicles for shipment (purging, protecting fragile components, weighing and marking for air and rail movement).
- Executing aircraft and railcar tie-down procedures.
- Loading and unloading unit vehicles on aircraft and railcars.
- Palletizing cargo on 463L pallets.

J-10. Load team composition is tailored to the type and quantity of equipment being loaded and time available for loading. The following guidelines for tailoring a load team are provided for planning purposes:

- For rail movements, a well trained team of five operators, using prefabricated tiedown devices, can complete loading and lashing of equipment on a chain equipped flatcar. Units are normally provided 72 hours for loading once the cars are spotted.
- For air movement, a six person team can provide efficient loading and tie down of equipment. United States Air Force Mobility Command offers the Equipment Preparation Course to units aligned under the Air Mobility Command Affiliation Program. The course trains unit load teams to prepare, load and tie down unit equipment on military aircraft.

Appendix K

UNIT MOVEMENT OFFICER (UMO) RESPONSIBILITIES AND CHECKLIST

K-1. The UMO is the commander's appointed representative and assists the commander in preparing the unit for movement. The UMO must know the unit's mission and the commander's intent when preparing the unit for movement, so appropriate coordination, planning, and execution can take place. The UMO assembles and maintains unit movement plans and documentation, readies the unit for movement, creates the unit's equipment list, and supervises the outload of the unit.

K-2. Unit movement personnel must prepare for any contingency. Detailed unit movement planning, coordination, training and testing the plan and efficient execution of the unit move are vital for successful deployment. Many variables may require changes to plans and data, so the UMO must be technically proficient to meet the changing demands.

K-3. UMO proficiency will not only enhance unit readiness, but expedite response time in a crisis that is critical to project the proper force. The UMO must focus on thorough planning, coordination, training, and execution of unit deployment procedures. The following are the functions of an UMO:

RESPONSIBILITIES OF BOTH BATTALION AND COMPANY UMOs

K-4. In addition to the broad duties described above, both the battalion and company UMOs responsibilities include:

- Planning convoy movements.
- Requesting commercial and military transportation.
- Coordinating with higher HQ and support activities for unit movements.
- Coordinating logistical support for the move.
- Coordinating with the A/DAGC and TALCE at the APOE and APOD.
- Coordinating with MTMC or MTMC representatives at the SPOE and SPOD.
- Transporting of the units' organic equipment and cargo.
- Establishing and training unit loading teams.
- Obtaining 463L pallets, containers; and blocking, bracing, packing, crating, and tie-down (BBPCT) materials.
- Ensuring all cargo is properly labeled with either MSLs or AIT tags.
- Ensuring all containers have working AIT tags.
- Identifying, labeling, segregating, documenting, and moving HAZMAT peculiar to the unit.
- Ensuring the unit has personnel who are authorized to certify HAZMATs.
- Preparing required customs documents.
- Conducting rail load safety briefings.

RESPONSIBILITIES OF COMPANY UMO

K-5. The Company UMO has the following responsibilities:

- Use TC-AIMS II to prepare and maintain documentation needed for unit movements. This includes maintaining the unit's movement data, from which the organizational equipment list (OEL) is generated, and creating and processing the unit deployment list (UDL). The OEL and UDL include equipment, personnel, and supplies. The company UDLs are passed to the battalion where they are merged into a battalion UDL.
- Prepare the company unit movement plans.
- Supervise the execution of the movement plans on order.
- Train unit load teams.
- Supervise preparation of unit load plans (air and vehicle load plans).
- Maintain on file approved copies of all unit load plans (air and vehicle load plans).
- Use TC-AIMS II to prepare convoy clearance requests and special hauling requests.
- Ensure packing lists are prepared for containers.
- Ensure unit personnel authorized to handle and certify hazardous materials are available.
- Ensure convoy vehicles are properly marked.
- Assist in preparation of unit passenger and cargo manifests. Inspect manifests for accuracy.

K-6. Unit UMOs often maintain movement binders. Movement binders normally include items such as appointment orders training certificates, recall rosters, current OEL; and copies of load cards, packing lists, transportation requests, convoy movement requests, special handling permits, and BBPCT requirements. Suggested items to be included in movement binders are in Appendix I.

RESPONSIBILITIES OF BATTALION UMOs

K-7. The Battalion UMO have the following responsibilities:

- Prepare the battalion unit movement plans.
- Supervise in the preparation of the company unit movement plans.
- Prepare recommendations as appropriate to enhance movement planning and execution.
- Train subordinate UMOs in duties and responsibilities of movement planning.
- Use TC-AIMS II to consolidate company UDLs and pass the battalion UDL to the brigade.
- Use TC-AIMS II to create military shipping labels (MSL) and automatic identification technology (AIT) tags.
- Use TC-AIMS II to create and submit convoy documentation.
- Create air load plans using AALPS.
- Identify supercargoes and railguards. (See appendix A.)
- Create commercial and military transportation documentation.

PROCESSES WITH WHICH THE UMO MUST BE FAMILIAR

K-8. Both the battalion and the company UMO should be familiar with the following:

- Roles and duties of the UMO and UMC.
- Preparing and maintaining unit movement plans.
- Air Force and Army airlift operations.
- Transportability of the unit's organic equipment.
- Characteristics and capabilities of the types of vessels, aircraft or railcars the unit may use to deploy.
- Highway, rail, and port operations.
- Procedures for requesting commercial transportation.
- Preparation and maintenance of the OEL and other documentation needed for unit movements.
- OEL reporting requirements.
- Movement of hazardous material.
- Internal vehicle load planning.
- Blocking, bracing, packing, crating and tiedown requirements for unit equipment.
- Palletization and containerization requirements for unit equipment.
- Cargo palletization procedures.
- Procedures for securing unit equipment on railcars.
- Procedures for securing vehicles in an aircraft.
- Unit equipment preparation and documentation for all modes of transportation.
- Creating unit load plans for air and vehicles.
- Customs documentation.
- Unit radio frequency (RF) tag and military shipping label (MSL) requirements.

COMMANDER'S UMO CHECKLIST

K-9. The following is an example of a Commander's UMO Checklist:

COMMANDER'S UMO CHECKLIST			
	YES	NO	NA
• Have a UMO and alternate been appointed?			
• Does the unit have the required publications to support unit movement planning?			
• Does the unit have an approved exercise, mobilization (RC only), and deployment (AC/RC) movement plan? (USAR MSC/STARC/installation approved)			
• Has the unit movement plan been prepared?			
• Has the UMO reviewed unit plans to ensure that they conform to directives of higher headquarters?			
• Does the unit have established procedures for the following:			
– Identifying, loading, certifying, and transporting hazardous cargo?			
– Marking of vehicles for convoy movement?			
– Loading and unloading of vehicles?			
– En route maintenance during convoy movement?			
• Have SOPs been reviewed and staffed to ensure conformity to regulations?			
• Does the unit movement plan address the following:			
– Movement of the advance detachment to the POE, if required?			
– Movement of the main body?			
– Movement of MTOE/CTA equipment from point of origin?			
• Does the unit have the most current OEL report data?			
• For units with organic vehicles, have load plans been completed for each loaded vehicle and trailer?			
• For units with equipment that cannot be transported organically, has a request for commercial transportation been submitted?			
• Has BBPCT material been considered, requirements identified, sources identified, and coordination made?			
• Have unit load teams been identified and trained?			
• For unit convoys, have convoy requirements been identified, appropriate coordination accomplished, and forms completed?			
• Has the unit identified, properly loaded, and certified hazardous cargo for movement?			
• Has the unit properly marked vehicles for convoy movement?			

Appendix L

UNIT MOVEMENT PLAN – A SAMPLE

This annex provides ideas, data, and samples of many items to be considered in developing the unit movement plan. For instance, Reserve Component (RC) units may have to complete one plan from point of origin to destination, and, another one from mobilization station (MS) to port of embarkation (POE). Active component (AC) units prepare movement plans for deployment to the POE. The plan is written in operation order format (FM 101-5). It becomes an order when required data and specific times are added. A unit may have several plans, each one planning for a specific contingency. The unit plans the move using the movement plan and executes the move under an operation order. The movement plan contains all annexes and appendices. Those not used are marked not applicable (NA) so that later developing planning data may be added to the existing plan. The operation order has specific movement instructions and is dated and signed. The annexes contain information required to support the plan.

UNCLASSIFIED

Classification
Copy no__of__copies
(Issuing Unit)
(Street Address)
(City, State, ZIP Code)
(Date of Plan)

MOVEMENT PLAN

References: FM, AR, STARC, installation, etc.

Mobilization, Exercise, and Deployment Plan, (Any other maps, SOPs, manuals, etc.)____include dates of publications.

Time Zone Used Throughout the Plan:_____

Task Organization

HQ, HHC,____Bn____,____

Co A _____,____

Co B _____,____

Co C _____,____

Co D _____,____

____Det____,____

1. **SITUATION:** This should be a generalization of when and how the plan is to be implemented.
 - a. Attachments and Detachments: Listed with appropriate units or the word "none."
 - b. Assumptions: These are conditions a commander believes will exist at the time the plan becomes a movement order. Assumptions are clearly stated and address the following:
 - (1) Equipment serviceability.
 - (2) Availability of personnel for movement.
 - (3) MTOE supplies and equipment to be transported.
 - (4) Pre-positioned equipment, if applicable.

- (5) Vehicles and other equipment in maintenance.
- (6) Gate assignments and time to destination.
- (7) Use of modes to destination.
- (8) Commercial movement.

The following are examples of these assumptions:

- (1) All unit equipment will be combat serviceable.
- (2) All unit personnel will be available for movement.
- (3) During a selected 200K call-up, cross-leveling of personnel and equipment will occur.
- (4) All (including excess) MTOE/TDA equipment and supplies will be transported to the destination.
- (5) All vehicles and equipment on job order or hand receipt will be recovered prior to departure from point of origin or arrangements will be made during Phase II for pick up by the unit or to ship commercially directly to the destination.
- (6) Gate assignments and arrival and departure times have been designated and coordinated with the DMC.
- (7) Organic convoy movements from point of origin to destination and subsequently to POE will be administrative.

2. **MISSION:** A concise statement of what is to be accomplished and its purpose. It accomplishes the following:

- a. Identifies unit(s).
- b. Identifies origin and destination.
- c. Identifies date and time movement begins and ends.
- d. Identifies methods of movement: organic and commercial, and mode: truck, rail, air, and sea.
- e. Identifies reason for moving (OPLAN, etc.).

An example of a mission statement from a mobilization movement plan is as follows:

The (issuing unit)____will move from point of origin to (mobilization station) ____to arrive not later than (Date/Time first element arrives at the gate)____. Advance parties will depart not later than (Date/Time of earliest advance party departure)____. Commercial transportation consisting of (trucks, buses, and/or rail)____(will/will not)____ be used, but will not necessarily move with the organic convoys.

An example of a mission statement from a deployment movement plan is as follows:

On order, the (unit name)_____will establish staging/marshaling areas and deploy personnel and equipment to perform operations in the designated theater of operations. Units will deploy from (installation)_____via APOE_____and SPOE_____. (Transportation motor pool [TMP]/commercial buses) will transport personnel to the APOE. All wheeled vehicles will be convoyed to the SPOE. Tracked vehicles will go by rail or commercial truck to the SPOE. Movement will commence IAW the alert order and the N-hour sequence (Annex S). Movement will be by (organic assets to the SPOE, or rail, or commercial truck)____. Order of march will be advance party followed by main body. Unit will be prepared to deploy on other contingency missions.

3. **EXECUTION:** This paragraph addresses the necessary planning, coordination, and execution functions that must take place in order to accomplish the mission. Specific tasks are given.

a. Concept of Movement: The concept clarifies the purpose of the plan. It addresses the following (Point of Origin to destination):

- (1) Receipt of movement orders.
- (2) Update and validation of OEL.
- (3) Recovery of equipment.
- (4) Commercial movement of personnel (buses, etc.).
- (5) Deadline to complete packing and loading.
- (6) Advance party.
- (7) Main body.
- (8) Order of march and convoy numbers for highway movement.
- (9) Shuttle of equipment.
- (10) Commercial movement of vehicles/equipment.
- (11) Priority of support.

- (12) UMC/ITO coordination.
- (13) ITO designated load dates and locations.
- (14) UMO duties and responsibilities.
- (15) Projected POEs.
- (16) Applicable OPLAN.
- (17) Actions at POE (reduction, receipt of cargo, etc.).

Examples of Concept of Movement statements are as follows:

- (1) Upon receipt of the alert notification, the first priority will be for the UMO to review the Request for Commercial Transportation and OEL.
- (2) To meet gate arrival and departure times, the unit will conduct simultaneous coordination, processing, and loading operations using the unit's N-hour sequence (Annex S).
- (3) Start point times are IAW DD Form 1265 (Annex ____).
- (4) Commercial transportation and support requirements, are located at Annex ____).
- (5) All organic vehicles will have a driver and assistant driver.
- (6) The UMO will coordinate and confirm the following:
 - (a) Changes to DD Form 1265 (Request for Convoy Clearance).
 - (b) Request for Commercial Transportation with Transportation Office NLT ____.
 - (c) En route stops and halts with appropriate businesses.
- (7) Commercial busses will be used to transport personnel and baggage. A troop commander will be designated for each commercial bus.
- (8) Supplies and equipment will be crated, packed, cushioned, and loaded on organic vehicles IAW current vehicle load cards no later than (number of hours) ____ prior to departure.
- (9) Advance party elements will be composed of personnel, equipment, and documentation required to accomplish tasks identified and will move by organic convoy IAW Annex _____. Vehicles will infiltrate to (consolidation point) ____ where battalion advance party convoy will form. The convoy number will be ____.
- (10) Main body organic convoys will depart point of origin IAW Annex _____. Individual convoys will consolidate at (consolidation point) ____.
- (11) Order of march and convoy numbers will be as follows:

Unit___ Convoy Number ___
 Unit___ Convoy Number ___
 Unit___ Convoy Number ___
 Unit___ Convoy Number ___
 Unit___ Convoy Number ___
 Unit___ Convoy Number ___
 Unit___ Convoy Number ___

(12) Shuttle convoys will (or will not) be used.

(13) Unit supplies and equipment will be prepared for commercial movement by (rail, truck, etc.)___ IAW the OEL in the unit load plan not later than (date/time)___.

b. Tasks to Subordinate Units and Elements: This paragraph clarifies and states tasks in sufficient detail to ensure action by subordinates or platoons and sections within a company. It addresses the following as relates to the actual move:

- (1) Company, platoon, or section tasks.
- (2) Maintenance.
- (3) Supply.
- (4) Food service.
- (5) Rear detachment.
- (6) NBC.
- (7) Loading teams.
- (8) Training.
- (9) Rail guards, convoy guides, supercargoes, etc.
- (10) Reports.

Examples of tasks listed in this section are as follows:

- (1) Specific for company, battery, or detachment: Advance party vehicles will convoy to consolidation point at___(date/time).
- (2) Maintenance (date/time to stop repairs and load maintenance equipment).
- (3) Supply (date/time to complete issue and start loading).

- (4) Food service (date/time to close down food service operation, clean up, and load food service section equipment).
- (5) NBC (chemical defensive equipment [CDE] guidance--disposition of CDE, load on vehicle or issue to individual).
- (6) Load teams (date/time to complete loading of advance party, main body, commercial loads, etc.).

c. Coordinating Instructions: These list required coordination for planning and executing phases with the following:

- (1) Higher headquarters.
- (2) STARC and MUSARC.
- (3) Destination and ITO.
- (4) Mobilization and training equipment site (MATES) and equipment concentration site (ECS) for RC).
- (5) Transportation terminal nodes (bus terminal, railhead, APOE, SPOE, STARC for highway movements).
- (6) Local agencies and businesses.
- (7) All elements internal to unit.

Example of coordination covered in this paragraph is as follows:

Physical security officer will coordinate current information with local and state police NLT _____ prior to movement.

4. **SERVICE SUPPORT:** This paragraph lists the support needed for the unit move. They must be listed in either the basic plan or as annexes to the plan. As a guide, if the information for a subparagraph will fit on one page, include it in the body of the plan. This makes your plan easier to read and easier to use. If the information for a subparagraph is longer than one page, consider placing it in an annex ____.

The following should be addressed:

a. Supply:

- (1) Class I (See Annex__). This annex/subparagraph should address subsistence for:
 - (a) Advance party.
 - (b) Main body.

(c) MATES/ECS recovery or load teams (if applicable).

(2) Class II (See Annex__). This annex/subparagraph should cover any pertinent information on OCIE.

An example of an item in this subparagraph is: Due to movement being an administrative one, all weapons, NBC equipment, and other non-combat OCIE will be packed, boxed, and moved administratively.

(3) Class III (See Annex__). This annex/subparagraph should address:

- (a) Topping off vehicles.
- (b) Trail party requirements.
- (c) En route refueling.
- (d) Packaged requirements.
- (e) Bulk requirements.
- (f) Motor fuels.
- (g) Aviation fuels.

Examples of items included in this subparagraph include the following:

- (a) All vehicles will be topped off and will carry fuel cans strapped in the mounts. Units without a fuel-dispensing facility will purchase from a local vendor using SF 44.
- (b) The trail maintenance party will carry the minimum quantities of packaged POL supplies to support the convoy as listed below:

48 qts	15W40 oil
15 gals	OE/HDO 30 oil (5-gal cans)
10 gals	GO 80W09 oil (5-gal cans)
35 lbs	GAA grease (pail)
24 qts	Dextron II (trans fluid)
1 gal	Brake fluid (1-gal can)
5 gals	Cleaning solvent
1 bdl	Rags

- (c) Refueling en route will be by (credit card, 5-gal cans, organic tanker, SF 44, etc.)_____.

(4) Class IV (See Annex__). This annex/subparagraph should include BBPCT requirements and pre-positioned requests.

Examples of items included in this subparagraph are:

- (a) All barrier/construction materials will be shipped.
- (b) The complete BBPCT list for the unit is in Annex ____.

(5) Class V (See Annex____). This annex/subparagraph includes guidance on the transportation of ammunition basic load (ABL).

(6) Class VI (See Annex____). This annex/subparagraph should be included if directed by OPLAN/OPORD).

(7) Class VII (See Annex____). This annex/subparagraph should cover the following:

- (a) Retrieval and commercial shipment procedures in MATES/ECS for RC.
- (b) Procedures for loading and accounting for equipment moved by commercial rail or truck.

An example of an item included in this subparagraph is: major end items will be loaded IAW Annex ____.

(8) Class VIII (See Annex____). This annex/subparagraph should address the following:

- (a) On-hand medical supplies transported to destination.
- (b) En route medical support.

Examples of items included in this subparagraph are as follows:

- (a) All vehicles and medics will move with authorized first aid kits.
- (b) Medical emergencies en route will be evacuated to the nearest hospital. Civilian ambulances and medical personnel may be used for assistance and evacuation.

(9) Class IX (See Annex____). This annex/subparagraph should address the following:

- (a) Combat ASL/PLL drawn from appropriate source and loaded on organic vehicles.
- (b) Trail party requirements.

Examples of items to be included in this subparagraph are as follows:

- (a) Combat PLL will be loaded on organic vehicles.
- (b) All Class IX ASL/PLL will be packed, crated, and boxed to meet requirements of Annex__.
- (c) During the convoy, the trail party will carry, as a minimum, the items identified in Annex__.

(10) Class X (See Annex__). This annex/subparagraph covers material to support nonmilitary programs such as agriculture and economic development. (Its use is not authorized for mobilization).

b. Maintenance:

- (1) Pre-movement support requirements (Annex __). This annex/subparagraph should include information on training, cleaning, and purging fuel containers and on priority of maintenance support.
- (2) En route support requirements (Annex __). This annex/subparagraph contains information on coordination for en route support (supporting facilities and POC names and phone numbers), trail party requirements, and en route PMCS, if required.

Examples of the items contained in this subparagraph are as follows:

- (a) The trail party for the main body will consist of ____vehicles and ____personnel.
- (b) En route PMCS will be performed at the halt number ____.
- (c) If a vehicle fails, stops, or has an accident, only that vehicle will halt. The maintenance trail party will provide assistance and keep the convoy commander informed.

c. Transportation:

- (1) Air. (Annex __, if required)
- (2) Convoy. (Annex __, if required)
- (3) Rail. (Annex __, if required)
- (4) Commercial. (Annex __, if required)
- (5) Unit movement data (UMD). (Annex __)

d. Procurement:

e. Facilities/Equipment:

f. Medical Evacuation Procedures:

g. Personnel:

Examples of items contained in this paragraph are as follows:

- (1) Uniform for movement will be battle dress uniforms (BDU) (combat boots and soft caps).
- (2) All personnel accountability inspections and convoy briefings (Annex M) will be conducted prior to movement (Annex S).
- (3) Each individual is authorized a total weight of ____ for personal baggage, ____ duffle bags for TA-50 and for clothing and comfort items. The unit's scales will be used to confirm this.

h. Civil/Military Coordination, if required:

i. Other:

- (1) Points of contact. (Annex ____)
- (2) Coordinating instructions.

5. COMMAND AND SIGNAL.

This paragraph addresses the following:

- a. Chain of command, to include convoy commanders, bus troop commanders, etc.
- b. Personnel control (formations, briefings, safety, etc.)
- c. Command locations.
- d. Signal instructions (telephone, radio, etc.)
 - (1) Commercial telephone.
 - (2) Expedited Movement Reports procedures.
 - (3) Radio procedures.
 - (4) Current signal operating instructions (SOI).
- e. N-Hour sequence (See Annex ____).

The movement plan must be signed by the commander or specifically authorized representative. If the signature is not reproduced or on subsequent copies, authentication by the appropriate coordinating staff officer is required.

Annexes (Annexes are used for those items that would require too much space in the basic plan. If an annex is not necessary, or unused, type title and N/A).

ANNEX A - Procurement. This annex includes sources for specific commodities and services.

ANNEX B - Class I - Subsistence.

ANNEX C - Class II.

This annex covers all guidance on clothing, individual equipment, tentage, organizational tool sets, NBC, hand tools, electronics, administrative housekeeping supplies, and weapons.

ANNEX D - Class III.

This annex gives guidance for aircraft and surface vehicles, coolants, deicing and antifreeze compounds (together with components and additives of such products) and coal, hydraulic and compressed gases and lubricants.

ANNEX E - Class IV.

This includes information on material for securing vehicle secondary loads and securing major end items to transportation assets.

Appendix 1 - Blocking, bracing, packing, crating, and tie-down (BBPCT) material for secondary cargo loads in vehicles, trailers and containers, dunnage and shoring for air deployment, and plastic pallet covers for 463L pallets.

Appendix 2 - Required documentation. This includes work order requests or memoranda for blocking, bracing, tie-down (BBT). (Requisitions are used to order packing, crating, and plastic covers).

ANNEX F - Class V.

Class V includes ammunition of all types (including NBC and special weapons), bombs, explosives, mines, fuses, detonators, pyrotechnics, propellants and other associated items. This annex should include the time and location of issue.

ANNEX G - Class VII.

Class VII includes final combinations of end products that are ready for their intended use (that is, tanks, launchers, mobile machine shops and vehicles, MHE, compressors, and construction equipment). The annex covers procedures for loading and accounting for equipment moved by commercial truck or rail. It also includes the time major end items will be loaded on commercial assets (reference - unit N-Hour sequence).

ANNEX H - Class VIII.

Class VIII is medical material, including medical peculiar repair parts. In addition to Class VIII, this annex covers en route medical support - first aid kits and medical support at POEs.

ANNEX I - Class IX.

This annex covers guidance on repair parts (less medical peculiar repair parts and components), to include kits, assemblies and subassemblies, repairable and nonrepairable, required for maintenance support of all equipment.

ANNEX J - Pre-movement Maintenance Support.

This annex covers such items as equipment status, contact teams, drivers' licenses, PMCS, sequence of events for maintenance operations, nonrepairable equipment, tow bars, and topping off of vehicles.

ANNEX K - Equipment Maintenance Support.

This covers maintenance during the actual move. It discusses abandoned vehicles, roadside repairs, tow bars, contact teams, repair services (and parts), and maintenance vehicles.

ANNEX L - Air Transportation.

This annex always covers personnel, TAT, and baggage. It also covers equipment if the OPLAN/OPORD indicates.

Appendix 1 - Documentation.

Documentation includes:

- DD Form 2130-1, C5 Cargo Manifest
- DD Form 2130-3 ,C141 Cargo Manifest
- DD Form 2130-6 ,KC10 Cargo Manifest
- DD Form 2130-13, C17 Cargo Manifest
- DD Form 2327, Unit Aircraft Utilization Plan

This appendix reflects:

- Equipment/TAT/cargo to deploy by air.
- Number of personnel and cargo to deploy.
- Bulk, oversized, and outsized equipment designated to deploy by air.

Appendix 2 - Listing of Pintle-Hook Vehicles.

Appendix 3 - Air Loading Procedures:

This may include:

- TAB A - Planeload commander's SOP.
- TAB B - Load team SOP.
- TAB C - Shoring material requirements.
- TAB D - 463L pallet and tie-down requirements.
- TAB E - Motor and aviation fuels for movement of organic air equipment.
- TAB F - Special handling cargo certification.

ANNEX M - Convoy Requirements.

Appendix 1 - Request for Convoy Clearance, DD Form 1265 (FM 55-30).

Appendix 2 - Request for Special Hauling Permit, DD Form 1266 (for outsized and overweight equipment).

Appendix 3 - Convoy Commander's Checklist.

Appendix 4 - Drivers' Strip Maps.

Appendix 5 - Convoy Commander's Safety Briefing.

The briefing should be used to ensure:

- Drivers are licensed for vehicles being driven.
- If hazardous material is part of the load, it is identified on DD Form 1750, UDL, and DD Form 836.
- Vehicles are properly prepared for movement. Considerations include:
 - Shipping configuration.
 - Fuel levels.
 - Secured secondary loads.
 - Shackles.
 - Purging requirements.
 - Flags.
 - Convoy signs.
 - Highway warning kits.
 - First aid kits.
 - Convoy speeds.

ANNEX N - Rail Requirements (Included only for those units where rail movement is projected).

Appendix 1 - Load Team SOP.

Appendix 2 - Documentation and Procedures for Rail Loading Equipment, which include as a minimum:

This appendix includes a rail load plan and is used to ensure training is validated and vehicles are properly prepared for movement. Guidance on vehicle preparation includes:

- Shipping configuration.
- Fuel levels.
- Secondary loads secured.
- Shackles.
- Markings (UIC and SUN).
- MSIs.

- Purging requirements.
- First aid kits.
- If HAZMAT is part of the load, vehicle placard.

ANNEX O - Commercial Movements Requirements.

Appendix 1 - Packing List (DD Form 1750). See Annex ____.

Appendix 2 – Miscellaneous.

ANNEX P – Facilities and Equipment.

This annex covers facilities en route and equipment requirements for loading at point of origin and unloading at destination.

ANNEX Q - Points of Contact Listing.

ANNEX R - Safety.

This annex covers:

- Motor vehicle operations.
- Rail load operations.
- Air load operations.
- Accident/injury prevention.
- Ammunition and explosive/POL safety.
- Prevention of carbon monoxide poisoning.
- Senior vehicle occupant responsibilities.

ANNEX S - N-Hour Sequence.

This annex identifies and schedules movement tasks.

ANNEX T - Plan Coordination Documentation.

This annex includes—

- Documentation requiring action from another command or agency, intermediate headquarters, and local agencies or businesses.
- OPLAN information - location and procedures.

ANNEX U - Appointment Memorandums and Training Certificates and/or Validations.

ANNEX V - Plan Approval.

Plans will be validated and approved by the chain of command.

ANNEX W - Unit Movement Data.

It is not necessary to forward this annex for approval unless required by approving authority.

Appendix 1 - OEL Printout.

This cross matches with DD Form 1750.

Vehicle load cards must cross match with OEL and packing list using SUN sequence.

Appendix 2 - Packing list (DD Form 1750).

This list for air, rail, convoy, and commercial movement must cross match with OEL and higher headquarters SUN sequence.

GLOSSARY

Section 1: Acronyms

AALPS	Automated Air Load Planning System
ABS	Automated Battlebook System
AC	Active Component
ACA	Airlift Clearance Authority
ADPC	Air Deployment Planning Course
AI	Artificial Intelligence
AIS	Automated Information Systems
AIT	Automatic Identification Technology
ALD	Available-to-Load Date
ANSI/ISO	American National Standards Institute/International Standards Organization
AO	Area of Operation
AOR	Area of Responsibility
APOD	Aerial Port of Debarkation
APOE	Aerial Port of Embarkation
APS	Army Prepositioned Stocks
ASG	Area Support Group
ASL	Authorized Stockage List
BBPCT	Blocking, Bracing, Pacing, Crating and Tie-down
BMC	Brigade Movement Coordinator
CADS	Containerized Ammunition Distribution System
CAP	Crisis Action Planning
CBL	Commercial Bill of Lading
CBRNE	Chemical, Biological, Radiological, Nuclear Explosive
CBT	Computer-Based Training
CCN	Convoy Clearance Number
C-Day	Commence Movement from Origin Day
CDT	Cargo Documentation Team
CFD	Container Fleet Division
CFR	Code of Federal Regulations
CFM	(See GFM)
CHE	Container Handling Equipment
CINC	Commanders-in-Chief
COB	Center of Balance
COMPASS	Computerized Movement Planning and Status System
CONPLAN	Operation Plan in Concept Format (Concept Plan)
CONUS	Continental United States
CP	Critical Points/Checkpoints/Command Post
CROP	Container Roll-In/Roll-Out Platform
CTA	Common Tables of Allowances
CTC	Cargo Transfer Company
DACG	Departure Airfield Control Group

DAMMS-R	Department of the Army Movements Management System – Redesign
DMC	(1) Defense Movement Coordinator (2) Distribution Management Center
DOD	Department of Defense
DODAAC	Department of Defense Activity Address Code
DOT	Department of Transportation
DPW	Director of Public Works
DSB	Deployment Support Battalion
DSC	Deployment Support Command
DTO	Division Transportation Officer
DTR	Defense Transportation Regulation (DOD 4500.9-R)
DTS	Defense Transportation System
EAD	Earliest Arrival Date
EDRE	Emergency Deployment Readiness Exercise
EDSS	Equipment Deployment Storage Systems
FCDT	Freight Consolidation and Distribution Team
FM	Field Manual
GATES	Global Air Transportation Execution System
GBL	Government Bill of Lading
GCCS	Global Command and Control System
GFM	Global Freight Management
GFM-ETA	Global Freight Management – Electronic Transportation Acquisition
GTN	Global Transportation Network
HAZMAT	Hazardous Material
HN	Host Nation
IATA	International Air Transport Association
IAW	In Accordance With
IBS	Integrated Booking System
ICAO	International Civil Aviation Organization
ICE	Individual Clothing and Equipment
ICODES	Integrated Computerized Deployment System
IFA	Installation Food Advisor
IMDG	International Maritime Dangerous Goods
ITO	Installation Transportation Officer
ITV	In-transit Visibility
JCS	Joint Chiefs of Staff
JFRG	Joint Force Requirements Generator
JMTCA	Joint Munitions Transportation Coordinating Activity
JOPES	Joint Operations Planning and Execution System
LAD	Latest Arrival Date
LAN	Local Area Network
LIN	Line Identification Number
MACOM	Major Army Command
MCE	Movement Control Element

MCT	Movement Control Team
METL	Mission Essential Task List
METT-TC	Mission, Enemy, Terrain, Troops And Time Available And Civilian Considerations
MHE	Materiel Handling Equipment
MOBCON	Mobilization Control
MOS	Military Occupation Specialty
MS	Mobilization Site
MSC	Military Sealift Command
MSL	Military Shipping Labels
MSR	Main Supply Route
MTMC	Military Traffic Management Command
MTMCTEA	Military Traffic Management Command Transportation Engineering Agency
MTMS	Munitions Transportation Management System
MTO&E	Modified Table of Organization and Equipment
MTS	Movement Tracking System
MWO	(1) Mobility Warrant Officer (2) Modification Work Order
NAT	Not Air Transportable (cargo)
NTAT	Not To Accompany Troops
NCOIC	Non-commissioned Officer in Charge
NTAT	Not To Accompany Troops
OCIE	Organizational Clothing and Individual Equipment
OCONUS	Outside the Continental United States
OEL	Organizational Equipment List
OIC	Officer in Charge
OPLAN	Operation Plan
OPORD	Operation Order
OPSEC	Operations Security
PLL	Prescribed Load List
PMCS	Preventative Maintenance Checks and Services
POC	Point of Contact
POD	Port of Debarkation
POE	Port of Embarkation
POV	Privately Owned Vehicle
PSA	Port Support Activity
RC	Reserve Component
RDD	Required Delivery Date
RF	Radio Frequency
RF-AIT	Radio Frequency-Automatic Identification Technology
RLD	Ready-to-load Date
RO/RO	Roll-On/Roll-Off
RP	Release Point
SAAM	Special Assignment Airlift Mission
SAEDA	Subversion and Espionage Directed Against (the Department of the Army)
SERE	Survival, Escape, Resistance, and Evasion
SI	Support Installation
SMCA	Single Manager Conventional Ammunition
SMCC	State Movement Control Center

SOP	Standard Operating Procedure
SP	Start Point
SPOD	Sea Port of Debarkation
SPOE	Sea Port of Embarkation
SRP	Soldier Readiness Processing
SSA	Supply Support Activity
STARC	State Area Command
SUN	Shipment Unit Number
TAA	Tactical Assembly Area
TACC	Tanker Airlift Control Center
TALCE	Tanker Airlift Control Element
TAT	To Accompany Troops
TAV	Total Asset Visibility
TB	Technical Bulletin
TC-AIMS II	Transportation Coordinators Automated Information for Movements System II
TC	Transportation Coordinator
TCE	(1) Transportation Control Element (2) Transportation Command Element
TCN	Transportation Control Number
TDA	Table of Distribution and Allowance
TEA	Transportation Engineering Agency
TM	Technical Manual
TOE	Table of Organization and Equipment
TPFDD	Time Phased Force Deployment Data
TPS	Transportation Protective Service
TTB	Transportation Terminal Brigade
UBL	Unit Basic Load
UDL	Unit Deployment List
UIC	Unit Identification Code
ULN	Unit Line Number
UMC	Unit Movement Coordinator
UMD	Unit Movement Data
UMT	Unit Movement Team
UMO	Unit Movement Officer
UMODPC	Unit Movement Officer Deployment Planning Course
USAR	United States Army Reserve
USR	Unit Status Report
USTRANSCOM	United States Transportation Command
WAN	Wide Area Network
WOA	Warning Order Activities
WPS	Worldwide Port System

Section 2: Terms And Definitions

A

Active Component (AC) – The active Army component of the United States Army refers to units on full-time active duty, as distinguished from the Reserve component that is composed of units of the United States Army Reserve and the Army National Guard.

Aerial Port of Embarkation (APOE) – A station which serves as an authorized port to process and clear aircraft (scheduled, tactical, and ferried) and traffic for departure from the country in which located.

Alert Holding Area – The equipment, vehicle, and passenger control area. It is normally located in the vicinity of the departure airfield. It is used to assemble, inspect, hold, and service aircraft loads. Control of the load is transferred from the individual unit to the DACG at this point.

Airlift Clearance Authority (ACA) – A Service activity that controls the movement of cargo (including personal property) into the Defense Transportation System.

Allowable Cabin Load (ACL) – The maximum payload that can be carried on an individual aircraft sortie.

Area of Operation (AO) – An operational area defined by the joint force commander for land and naval forces. Areas of operation do not typically encompass the entire operation area of the joint force commander, but should be large enough for the component commanders to accomplish their missions and protect their forces.

Army Pre-positioned Stocks (APS) – Supplies placed at or near the point of planned use or at a designated location to reduce reaction time, and to ensure timely support of a specific force during initial phases of an operation.

Arrival/Departure Airfield Control Group (A/DACG) – A provisional organization provided by the designated installation to perform aerial port functions during unit deployment/employment/ redeployment.

Assembly Area — A site where a command is assembled preparatory to further action.

Authorized Stockage List (ASL) – A list of items that a direct support unit is authorized to stock based on established criteria. Criteria are usually crafted based on demands for the item to be supplied.

Automated Air Load Planning System (AALPS) – A computerized system to rapidly estimate total airlift requirements and to produce individual aircraft load plans. The system allows preplanned equipment deployment packages to be built, analyzed, and maintained.

Automated Battlebook System (ABS) – An automated system that provides reference information and real-time visibility of the afloat and land based Army pre-positioned stocks (APS).

Automatic Identification Technology (AIT) – A suite of tools for facilitating total asset visibility (TAV) source data capture and transfer. Automatic Identification technology (AIT) includes a variety of devices, such as bar codes, magnetic strips, optical memory cards, and radio frequency tags for marking or tagging individual items, multi-packs, equipment, air pallets, or containers, along with the hardware and software required to create the devices, read the information on them, and integrate that information with other logistic information. AIT integration with logistic information systems is key to the Department of Defense's TAV efforts.

Available-to-load date (ALD) – A date specified for each unit in a TPFDD indicating when the unit will be ready to load at the POE.

B

Bar Code – A code consisting of a group of printed and variously patterned bars, spaces, rectangles, or other shapes that encode data that is designed to be scanned and read into computer memory to provide identification or other information relating to the object it labels.

(1) Linear Bar Code - A code consisting of a group of printed and variously patterned bars and spaces, and sometimes numerals, that is designed to be scanned and read into computer memory as identification for the object it labels. An ordinary linear barcode, with vertical bars and stripes, can hold about 16 ASCII characters.

(2) Two Dimensional Bar Code - Data encoded in many different size rectangles, can hold between 1000 and 2000 ASCII characters. Two Dimensional barcodes have to be scanned in a raster format (like a television) to cover their whole area.

Brigade Movement Coordinator (BMC) – Coordinates the movement of personnel and equipment beyond the capability of organic unit assets with the installation transportation officer or UMC. The BMC is the liaison between the UMO (at battalion and company) and the ITO in CONUS locations, the MCT in OCONUS locations; and in both locations, the UMC.

C

C-Day – see Commence Movement from Origin Day.

Call Forward Area – The area is that portion of the departure airfield where the DACG and TALCE conduct joint inspections of aircraft loads. A final briefing is provided to deploying troops by the TALCE. The DACG and TALCE review all load plans and manifests for accuracy. The deploying unit corrects all discrepancies found by the joint inspection in this area.

Call-Forward Schedules – Movement directives issued by the port commander that specify when units must have their equipment at the port of embarkation (POE) to meet the available-to-load (ALDs) date.

Cargo Documentation Team - A Cargo Documentation Team is a small TOE detachment staffed with 88N Documentation Specialists. Its mission is to administrate the documentation associated with moving cargo. The Cargo Documentation Team has no MHE. The team is normally assigned to augment a Cargo Transfer Company to prepare documentation for cargo and equipment being loaded on vessels.

Cargo Transfer Company – A CTC is organized with four Cargo Transfer Platoons and a Documentation Section. The four platoons have material handling equipment (MHE) to support transshipping cargo, containers, and unit equipment to ships and aircraft. Each platoon can operate independently at a remote site to support transshipment operations. The company assists in loading ships and operating a staging area.

Center of Balance (COB) – The point on the vehicle or pallet at which the vehicle or pallet would balance if placed on a fulcrum.

Chock – A piece of wood or other material placed at the side of cargo, or to the front and rear of wheels on vehicles and aircraft, to prevent rolling or moving sideways.

CMF-ETA System – CFM is a DOD freight traffic management information system designed to provide a centralized database of master reference files, freight tenders, domestic route order requests, Bill of Lading shipment information, and carrier performance data. The CFM interface provides timely accurate carrier costing data to the ITO/TMO for Bill of lading shipments. ETA is the Electronic Transportation Acquisition aspect of the system, which moved to a web-based home page and eliminated the field portion of the system.

Classified Cargo – Cargo that has been determined by proper authority to require protection against unauthorized disclosure in the interest of national security, and which has been so designated.

Close Column – A form of convoy organization that provides the greatest degree of convoy control. It is characterized by vehicle intervals of 25 to 50 meters and speeds under 25 mph. Close column is normally used during limited visibility or on poorly marked or congested roads.

Commence Movement from Origin Day (C-Day) – The unnamed day for planning on which movement commences in a deployment operation in support of a crisis. The deployment may be movement of troops, cargo, weapon systems, or a combination of these elements using any and all types of transport. All movement required for C-Day preparatory actions or pre-positioning of deployment support are expressed relative to this day as negative days. For execution, the actual day is established under the authority and direction of the Secretary of Defense.

Common Tables of Allowances (CTA) – An equipment authorization document which prescribes basic allowances of organizational and individual equipment. (Does not pertain to major military equipment.)

Computerized Movement Planning and Status System (COMPASS) – A FORSCOM system designed to support unit movement planning and requirements for Active and Reserve Component Units. This system provides the automated organization equipment list (OEL) containing unit movement data (UMD), which reflects the go-to-war equipment profile of deploying units.

Concept Plan (CONPLAN) – An operation plan in an concept format that would require considerable expansion or alteration to convert to an OPLAN and OPORD.

Container Handling Equipment (CHE) – Material handling equipment (MHE) designed specifically to receive, maneuver and dispatch containers.

Continental United States (CONUS) – The 48 contiguous states and the District of Columbia.

Convoy Clearance Number (CCN) – Each convoy is identified by its CCN. The CCN identifies the convoy during its entire movement. The CCN is normally assigned by the STARC via the MOBCON system, but can be assigned by the installation.

Convoy Commander – An officer, designated to command the convoy, subject to the orders of the officer in tactical command.

Crisis Action Planning (CAP) – The system used to conduct planning during a crisis situation. The focus of the process is to determine the best method of accomplishing assigned tasks and direct the actions necessary to accomplish the mission.

D

Defense Movement Coordinator (DMC) – Defense Movement Coordinator (DMC) is a designated official established in each State Movement Control Center to routinely coordinate defense highway movements. The DMC coordinates military movement plans that traverse or originate in his/her State including those that originate elsewhere. In coordination with his/her State counterparts, the DMC requests permits, obtains clearances, monitors and coordinates moves, resolves problems, and reroutes moves as necessary. (See also State Area Command, and State Movement Control Center.)

Defense Transportation System (DTS) – The infrastructure supporting DOD's common-user transportation needs. The DTS consists of military and commercial assets, services, and systems organic to, contracted for or controlled by DOD.

Defense Transportation Regulation (DTR) – The regulation that establishes the specific governing requirements to be followed when moving personnel, supplies, and equipment, including arms, ammunition, explosives and classified material. The DTR assigns various levels of required protection and monitoring to material based on categories of risk.

Deliberate Planning – The system used to conduct joint planning during peacetime. The focus of this process is to determine the best method of accomplishing assigned tasks and direct the actions necessary to accomplish the mission. Deliberate planning produces operation plans, either OPLANS, or CONPLANS, or functional plans.

Department of the Army Movements Management System – Redesign (DAMMS-R)

– DAMMS-R is an automated transportation system designed to provide movements control, and mode managers with an automated capability to perform their mission. Additionally, for unit personnel with a need to create and request convoys in the theater of operations, DAMMS-R provides an automated tool to assist them in the performance of their mission. DAMMS-R is also a source data system using manifest data when available to create TMRs. DAMMS-R provides automated assistance in convoy planning / highway scheduling, movement control, and mode management.

Department of Defense Activity Address Codes (DODAAC) – A unique six-position alphanumeric code assigned to identify specific units, activities, or organizations as found in Department of Defense Activity Address Directory.

Departure Airfield Control Group (DACG) – The organization provided by the designated installation which will control the unit to be airlifted from the marshaling area until released to the TALCE at the ready line.

Deployment – In the strategic sense, the planning, preparation, and movement of forces and their support from any location to an area of operations in response to a military need or crisis.

Deployment Support Battalions (DSB) – Units that execute coordinated deployment and sustainment transportation through terminals and facilities in a specified area of the world. They deploy personnel in deployment support teams (DST) worldwide.

Deployment Support Command (DSC) – A subordinate command of MTMC with the broad mission of supporting unit deployment.

Division Transportation Officer (DTO) – The DTO is a staff planner who coordinates with the division G3 on tactical moves and operations and with the G4 on logistical and administrative matters. The DTO also provides transportation guidance to other staff sections and commanders within the division. The DTO is the formal link between the division and the Corps transportation officer. The four primary DTO functions are advisory, planning, coordination, and technical assistance.

Dunnage – Lumber or other material used to brace and secure cargo to prevent damage.

E

Earliest Arrival Date (EAD) – A date specified by the supported CINC as the earliest date that a unit, resupply shipment, or replacement personnel can be accepted at a port of debarkation. Used with the Latest Arrival Date (LAD), it delineates a delivery window for transportation planning.

Embarkation – The process of putting personnel and/or vehicles and their associated stores and equipment into ships and aircraft.

Emergency Deployment Readiness Exercises (EDRE) – Periodic events designed to exercise a unit's or command's movement plans. EDREs may involve the unit moving to

ports of embarkation (POE) and loading unit equipment on strategic sealift or airlift transportation.

Equipment Deployment Storage Systems (EDSS) Containers – Unit owned containers. The EDSS container is a CTA item. Units must ensure all EDSS containers are reflected on their OEL.

F

Fixed Facility – Terminal with established cargo-handling capability designed for the transfer of freight. These are usually facilities engaged in civilian commerce.

Force Projection – The ability to invoke the military element of national power from the continental United States (CONUS) or outside CONUS (OCONUS), in response to requirements for military operations.

Freight Consolidation and Distribution Team (FCDT) – An FCDT is a small TOE detachment staffed to prepare documentation for personnel, supplies, and equipment being loaded on vessels. It is located at small terminals to provide independent loading and documentation services; or at larger port complexes, as a tailored augmentation to the TTB

G

Global Command and Control System (GCCS) – GCCS is the primary joint system designed to fulfill the requirement for a capability to move a US fighting force on the globe at any time providing the services, unified commander and components with the information and direction necessary to complete their mission. It is a highly mobile, deployable, compatible, interoperable, and integrated command, control, communications, computers, and intelligence system. GCCS objective is to provide the war fighter with a common, real-time picture of the battle space and the ability to order, respond, and coordinate horizontally and vertically to accomplish the mission.

Global Air Transportation Execution System (GATES) – An Air Force system that automates support for receipt, movement and billing of cargo and passengers.

Global Transportation Network (GTN) – The automated support necessary to enable USTRANSCOM and its components to provide global transportation management. The global transportation network provides the integrated transportation data and systems necessary to accomplish global transportation planning, command and control, and in-transit visibility across the range of military operations.

H

Hazardous Material (HAZMAT) – A substance or material that has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce and that has been so designated.

Holding Area — A site where a unit's progress (personnel or equipment) is halted temporarily.

Host Nation Support (HNS) – Civil and military assistance provided by host nations to allied forces and organizations in peacetime, transition to war, and in wartime.

I

Infiltration – (1) The movement through or into an area or territory occupied by either friendly or enemy troops or organizations. The movement is made, either by small groups or by individuals, at extended or irregular intervals. When used in connection with the enemy, it infers that contact is avoided. **(2)** A form of convoy organization characterized by varying vehicle intervals and speeds. It is used only as a last resort in extremely congested areas.

Installation Food Advisor (IFA) – The individual responsible for guidance and oversight of dining facility operations on an installation.

Integrated Booking System (IBS) - IBS is the execution system of the DTS for booking of international surface cargo during peacetime and wartime operations. The system supports MTMC traffic management and satisfies the MTMC mission to execute the deliberagte plans developed for international cargo. The system is responsible for booking cargo during contingency operations.

Integrated Computerized Deployment System (ICODES) – Assists in the pre-stowage process by matching a vessel characteristics file against the cargo being offered for shipment to produce a vessel stowage plan. Calculates critical sailing characteristics, including trim and stability.

J

Joint Chief of Staff (JCS) – The principal military advisory group to the President of the United States, composed of the Chairman of the Joint Chiefs of Staff, the Vice Chairman of the JCS, the chiefs of staff of the Army and Air Force, the Chief of Naval Operations, and the Commandant of the Marine Corps.

Joint Force Requirements Generator (JFRG) – Single force integrator which accelerates deployment planning and execution and interfaces with JOPEs. It is used to build force structures to meet mission, source required forces, develop and assess phasing/travel mode, compute sustainment requirements, and estimate airlift and sealift requirements.

Joint Munitions Transportation Coordinating Activity (JMTCA) – Activity established by Commander Operations Support Command to develop procedures to receive airlift and sealift export requirements of munitions.

Joint Operations Planning and Execution System (JOPES) – JOPES supports integrated planning and command control of mobilization, deployment, employment and sustainment activities using an improved information system.

K

L

Latest Arrival Date (LAD) – A date specified by the supported CINC as the latest date that a unit, resupply shipment, or replacement personnel can be accepted at a port of debarkation. Used with the Earliest Arrival Date (EAD), it delineates a delivery window for transportation planning.

Line Identification Number [LIN] – A number assigned to a generic nomenclature, by US Army technical committee action, for the purpose of identifying the line on which the official generic nomenclature is listed. The LIN is used as a tool for sorting items into sequence, consolidating assets, requirements, and other data for federally stocked-numbered items to which it is related.

Loading Ramp Area – The area in which the process of putting personnel, materiel, supplies and other freight on board ships, aircraft, trains, road vehicles, or other means of conveyance occurs.

Logistics Applications of Automated Marking and Reading Symbols (LOGMARS) – A system that produces bar code labels. Associated system equipment reads the labels and the data is used for a variety of purposes. In transportation applications, it is used to track cargo.

M

Main Supply Route (MSR) – The route or routes designated within an area of operations upon which the bulk of traffic flows in support of military operations.

Major Army Command (MACOM) – A command directly subordinate to, established by authority of, a specifically designated by Headquarters, Department of the Army. Army component commands of unified and specific commands.

March Column – The largest of the three convoy organizational elements, it is a group of two to five serials, and represents approximately a battalion-to-brigade size element. Each column has a column commander.

March Unit – The smallest of the three convoy organizational elements. It is a subdivision of the serial and comes under the direct control of the march unit commander. It is the smallest organized subgroup of the convoy and usually will not exceed 20 vehicles.

Marshalling Area – A location in the vicinity of a reception terminal or prepositioned equipment storage site where arriving unit personnel, equipment, materiel, and accompanying supplies are reassembled, returned to the control of the unit commander, configured in an effective way, and prepared for onward movement. The joint complex commander designating the location will coordinate the use of the facilities with other allied commands and the host nation, and will provide life support to the units while in the marshalling area.

Material Handling Equipment – Equipment specifically designed for mechanically handling packaged or bulky items that are usually in a shipping or storage configuration.

Military Sealift Command (MSC) – A major command of the US Navy and the component of USTRANSCOM which provides designated sealift for global movement by the Services

Military Traffic Management Command (MTMC) – A major command of the U.S. Army and USTRANSCOM's component command responsible for designated CONUS land transportation, common-user water terminals, and traffic management for global movement by the Services.

Mission Essential Task List (METL) – A list of materiel authorized to combat, combat support, combat service support, and combat readiness training forces necessary to accomplish their assigned missions.

Mobilization Station (MS) – The designated military installation to which a Reserve Component unit or individual mobilizes or moves upon mobilization for further processing, training, and movement.

Movement Control Element (MCE) – Any organization responsible for the planning, routing, scheduling, and control of personnel and cargo movements over lines of communications.

Movement Control Team (MCT) – Movement control teams (MCTs) are Army units that regulate the movement of personnel and materiel as well as the coordination of bulk fuel and water transportation at the pipeline and production take-off points.

Movement Tracking System (MTS) – MTS is a satellite-based tracking/communication system consisting of a mobile unit mounted in the vehicle and a base unit controlled/monitored by movement control and mode operators. The MTS includes a global positioning system capability, a capability to send messages between base and mobile units, and a capability to locate/track a vehicle position on a map background using personal computer-based software.

N

Not To Accompany Troops (NTAT) - Equipment that is part of a unit move, but is normally shipped by surface and does not accompany the troops. It consists of all other equipment required by the unit to perform its mission not included in Red TAT and Yellow TAT categories, both of which designate equipment to accompany troops. (See also Red TAT and Yellow TAT.)

O

Open Column – The preferred formation (of three) used to conduct a convoy. It is characterized by vehicle intervals of 100 meters or more and speeds in excess of 25 mph. Open column is normally used on well marked open roads with good visibility.

Operation Plan (OPLAN) — Any plan, except for the Single Integrated Operational Plan, for the conduct of military operations. Plans are prepared by combatant commanders in response to requirements established by the Chairman of the Joint Chiefs of Staff and by commanders of subordinate commands in response to requirements tasked by the establishing unified commander. Operation plans are prepared in either a complete format (OPLAN) or as a concept plan (CONPLAN).

Organizational Equipment List (OEL) – An OEL is a computerized listing (in printed and data file formats) of on-hand equipment, personnel and supplies in a unit. The OEL supports cargo manifesting for movements and provides input to transportation managers to identify movement requirements.

Outside the Continental United States (OCONUS) – Any location beyond the limits of the 48 contiguous United States and the District of Columbia. (Alaska, Hawaii, Puerto Rico, and U.S. territories and possessions are OCONUS).

P

Palletized Unit Load — Quantity of any item, packaged or unpackaged, which is arranged on a pallet in a specified manner and securely strapped or fastened thereto so that the whole is handled as a unit.

Placarding — To display a label identifying cargo (i.e., hazardous, sensitive, or classified) contents for movement.

Port of Embarkation — The geographic point (seaport or airport) in the routing scheme where a movement transitions from ground to air or sea.

Port of Debarkation – The geographic point (seaport or airport) in the routing scheme where a movement transitions from air or sea back to land.

Port Support Activity (PSA) – A flexible support organization composed of assets from a designated installation which ensures the equipment of the deploying units is ready to load. The PSA operates unique equipment in conjunction with ship loading operations. The PSA is operationally controlled by the military port commander or TTB commander.

Pre-deployment Activities – Pre-deployment activities are those tasks accomplished by Army units and installations prior to movement to POEs.

Prepositioned Material Site — Location of strategically located unit configured stocks.

Prescribed Load List (PLL) – A PLL is kept to support a unit's daily organizational maintenance operations. Technically, it is a list of unit maintenance repair parts that are demand supported, non-demand supported, and specified initial stockage repair parts for newly introduced end items. Normally, this is for a prescribed number of days of supply. In practice, the term PLL is often used to refer to the actual body of materiel that the list delineates.

Proponent – An Army organization or staff activity that is assigned primary responsibility for material or subject matter in its area of interest.

Protected Cargo – Those items designated as having characteristics which require they be identified, accounted for, secured, safeguarded or handled in a special manner to ensure their safeguard or integrity. Protected cargo is subdivided into controlled, pilferable and sensitive cargo.

Protected Sensitive Cargo – Small arms, ammunition, and explosives which are a definite threat to public safety and can be used by militant, revolutionary, criminal or other elements for civil disturbances, domestic unrest, or criminal actions.

Q

R

Ready-to-load date (RLD) – The RLD is the date when the unit must be prepared to depart its origin. For AC (Active Component) units, origin is the installation and for RC units origin is the mobilization station or site.

Red TAT – Equipment that must accompany troops because they require it immediately at destination. (See also Yellow TAT and NTAT.)

Redeployment – The transfer of a unit, an individual, or supplies from one area to another area, to another location within the area, or to the zone of interior for the purpose of further employment.

Required Delivery Date (RDD) – The date that a force or materiel must arrive at the destination and be ready for employment.

Reserve Component – The Reserve Components of the Armed Forces of the United States are the Army National Guard, Army Reserve, Naval Reserve, Marine Corps Reserve, Air National Guard, Air Force Reserve, and the Coast Guard Reserve. Each component has three reserve categories: The Ready Reserve, the Standby Reserve, and the Retired Reserve.

S

Serial – One of the three convoy organizational elements, a serial is a subdivision of the march column and consists of march units (the smallest of the three elements) of a march column. All the march units are grouped under a serial commander.

Soldier Readiness Processing (SRP) – The program established to ensure that all soldiers are maintained administratively ready for deployment at all times.

Special Assignment Airlift Mission (SAAM) – SAAM is defined as airlift requirements for special pickup or delivery by AF Air Mobility Command at points other than established routes, and which require special consideration because of the number of passengers

involved, the weight or size of the cargo, the urgency or sensitivity of movement, or other special factors.

Staging Area — A general locality established for the concentration of troop units and transient personnel between movements over the lines of communications.

State Area Command (STARC) – A mobilization entity within the ARNG state organization that is ordered to active duty when ARNG units in the state are alerted for mobilization. It provides for control of mobilized ARNG units from home station until arrival at mobilization station. It is also responsible for planning and execution of military support for civil defense, land defense plans under the respective area commander, and military family assistance. (See also Defense Movement Coordinator, and State Movement Control Center.)

State Movement Control Center (SMCC) – The agency responsible for performing the convoy movement control responsibilities of the Adjutant General of each state. The DMC is located in the SMCC. (See also State Area Command, and Defense Movement Coordinator.)

Subversion and Espionage Directed Against the Department of the Army (SAEDA)

– Security guidance training required within the past 12 months for the deploying soldier.

Supercargo – Personnel that accompany cargo on board a ship for the purpose of accomplishing enroute maintenance and security.

Supply Support Activity (SSA) – Activities assigned a Department of Defense activity address code and having a supply support mission.

Survival, Escape, Resistance, and Escape (SERE) – Training and actions taken by military members to assist them in surviving in hostile environments, resisting enemy activities, escaping enemy forces, and evading enemy forces until the individual or unit can be reunited with friendly forces.

Synchronization - Synchronization is arranging activities in time, space, and purpose to mass maximum relative combat power at a decisive place and time. Without synchronization, there is no massing of effects. Through synchronization, commanders arrange battlefield operating systems to mass the effects of combat power at the chosen place and time to overwhelm an enemy or dominate the situation. Synchronization is a means, not an end. Commanders balance synchronization against agility and initiative; they never surrender the initiative or miss a decisive opportunity for the sake of synchronization.

T

Table of Distribution and Allowance (TDA) – An authorization document prescribing unit organization, personnel, and equipment for units which generally form the infrastructure of the Army. They are generally non-combat, non-deployable workload based units

Tactical Assembly Area (TAA) – An area that is generally out of the reach of light artillery and the location where units make final preparations (pre-combat checks and inspections) and rest, prior to moving to the line of departure.

Tanker Airlift Control Center (TACC) – The TACC is the Air Force Air Mobility Command's direct reporting unit responsible for tasking and controlling operational missions for all activities involving forces supporting USTRANSCOM's global air mobility mission.

Tanker Airlift Control Element (TALCE) – A mobile command and control organization deployed to support strategic and theater air mobility operations at fixed, en route, and deployed locations where air mobility operational support is nonexistent or insufficient.

Time Phased Force Deployment Data (TPFDD) – The computer-supported database portion of an operation plan; it contains time-phased force data, non-unit-related cargo and personnel data, and movement data for the operation plan.

Table of Organization and Equipment (TOE) – Prescribes the doctrinal organization, personnel and equipment required for a particular type of a unit. Fielded units operate in terms of a modification Table of Organization and Equipment (MTOE). MTOEs form the "go-to-war" units of the Army, whether those units are direct combat (infantry, armor, artillery), CS (engineer, signal, military police) or CSS (quartermaster, maintenance, medical) units.

Total Asset Visibility (TAV) – TAV is the capability to provide users with timely and accurate information on the location, movement, status, and identity of units, personnel, equipment, materiel and supplies. It also includes the capability to act upon that information to improve overall performance of the Department of Defense's logistic practices.

Trail Officer – The trail officer is a convoy position. The trail officer checks and observes vehicles at the SP and keeps the convoy commander informed on the status of vehicles that fall out of the convoy, oversees all maintenance, recovery, accident investigation, medical aid, and disposition of disabled equipment, picks up all guides and markers left by preceding march elements.

Transportation Control Number (TCN) – A 17-position alphanumeric character set assigned to control a shipment throughout the transportation cycle of the Defense Transportation System.

Transportation Coordinator's - Automated Command And Control Information System - TC-ACCIS automates the transportation functions of unit movement planning, execution, ITO. It provides accurate and timely movement information to the Army and joint deployment community for the deployment of active and reserve component units.

Transportation Coordinator's Automated Information for Movement System II (TC AIMS II) – An automated transportation system being fielded. It is for use by all the Services and will include most transportation functions required at the unit and installation for unit movement.

Transportation Engineering Agency (TEA) – TEA is a major subordinate command of MTMC whose mission is to provide the Department of Defense with the research,

engineering, and analytical expertise to improve the deployability of U.S. Armed Forces, the transportability of equipment, the infrastructure of the Defense Transportation System, and the management and execution of the DOD transportation programs for national defense. MTMCTEA administers the Highways for National Defense (HND) Program. This program ensures that DOD public highway requirements are being met.

Transportation Protective Service (TPS) – A commercial carrier service performed according to Department of Defense standards that provides in-transit physical security for shipments of SECRET, CONFIDENTIAL, or sensitive material.

Transportation Terminal Brigades (TTB) – TTBs are Reserve Component (RC) units that allow the MTMC to expand the number and capability of seaports. They normally take over responsibility for port operations from the Tiger Team. TTBs conduct ocean terminal operations at established ports where existing manpower, equipment, and infrastructure are available. They may be deployed OCONUS to expand the number and capability of ports for sustainment or redeployment purposes.

U

Unit Basic Load (UBL) – A unit's quantities of class 1 through 5 and 8 supplies which allow a unit to initiate its combat operations. The UBL is maintained on hand and are combat-deployable using organic transportation in a single lift. It is expressed according to the wartime organization of the unit and maintained at the prescribed levels. Basic load items subject to deterioration or having a shelf life are replaced as required.

Unit Deployment List (UDL) – The UDL shows the equipment, personnel, and supplies that will actually deploy with the unit. It is a list tailored from the OEL.

Unit Identification Code (UIC) – A six-character alphanumeric code that uniquely identifies each active, reserve, and National Guard unit of the **Army** forces.

Unit Line Numbers (ULN) – A seven-character alphanumeric code that describes a unique increment of a unit deployment, i.e., advance party, main body, equipment by sea and air, reception team or trail party in a JOPES TPFDD.

Unit Movement Coordinator (UMC) – The UMC is the command technical transportation movements expert who provides advice to those in both superior and subordinate positions.

Unit Movement Data (UMD) – UMD is a unit personnel, equipment, and supply listing containing corresponding transportability data. Tailored UMD has been modified to reflect a specific movement requirement.

Unit Movement Officer (UMO) – The UMO is appointed at the company and battalion levels and represents the commander in attending to the details of getting the unit ready for movement and maintaining that readiness when it is achieved.

Unit Movement Team (UMT) – The UMT is a MTMC ad hoc organization that opens and temporarily operates a SPOE until the TTB is operational. It deploys to the SPOE to coordinate contracts, set up operations, and begin to receive cargo, plan for traffic flow,

obtain waivers and clearances, establish liaison with the deploying unit, develop pre-stow plans, and provide reports. Liaison with the deploying unit is especially critical to establish the flow into the port based on the priority of load. Command authority remains with the team until the TTB commander arrives and assumes command. See FM 3-35.4.)

Unit Status Report (USR) – Designated MTOE and TDA units submit recurring Unit Status Reports in accordance with the guidance in AR 220-1. These reports determine a unit's status by comparing selected personnel, equipment, and training factors to wartime requirements, and by obtaining the commander's overall assessment of the unit. Unit status reports are designed to measure the status of resources and training of a unit at a given point in time.

United Nations Identification (UN/ID) – A number from the Hazardous Materials Table in 49 Code of Federal Regulation 172 that identifies hazardous material proper shipping names for either the United Nations (UN) or North America (NA). The NA numbers are not recognized for international transport.

United States Transportation Command (USTRANSCOM) – The unified command that is the Department of Defense single manager for sea, land, and air transportation in both peace and war. USTRANSCOM controls all Department of Defense transportation assets except those that are Service-unique or theater-assigned.

Unitized Load — A single item or a number of items packaged, packed, or arranged in a specified manner and capable of being handled as a unit. It may be accomplished by placing the item or items in a container or by banding them securely together.

V

W

Worldwide Port System (WPS) – A standalone, transportable, cargo terminal operations and cargo documentation system designed to provide real time management capability to the terminal commander. It supports ITV for both general cargo and unit moves, and produces those reports necessary terminal operations, plus operating the MILSTAMP Ocean Cargo manifests.

X, Y, Z

Yellow TAT – Equipment that must accompany troops because it must be accessible during the voyage. For personnel traveling via commercial air, this is generally only baggage that fits under the seat. Yellow TAT is not palletized for shipment. (See also Red TAT and NTAT.)

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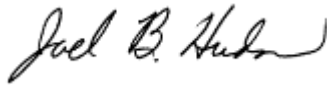
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